

AD/A-002 859

A STRUCTURAL WEIGHT ESTIMATION PROGRAM
(SWEEP) FOR AIRCRAFT. VOLUME VI - WING
AND EMPENNAGE MODULE. APPENDIX A: GEN-
ERAL INFORMATION FOR MODULE FLOW CHARTS
AND LISTINGS. APPENDIX B: PROGRAM FLOW
CHARTS, OVERLAYS (8,0), (14,0), (15,0),
(16,0) AND (17,0)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Three computer programs were written with the objective of predicting the structural weight of aircraft through analytical methods. The first program, the structural weight estimation program (SWEEP), is a completely integrated program including routines for airloads, loads spectra, skin temperatures, material properties, flutter stiffness requirements, fatigue life, structural sizing, and for weight estimation of each of the major		

20. ABSTRACT (CONTINUED)

aircraft structural components. The program produces first-order weight estimates and indicates trends when parameters are varied. Fighters, bombers, and cargo aircraft can be analyzed by the program. The program operates within 100,000 octal units on the Control Data Corporation 6600 computer. Two stand-alone programs operating within 100,000 octal units were also developed to provide optional data sources for SWEEP. These include (1) the flexible airloads program to assess the effects of flexibility on lifting surface airloads, and (2) the flutter optimization program to optimize the stiffness distribution required for lifting surface flutter prevention.

The final report is composed of 11 volumes. This volume (volume VI) contains the methods and program description for the wing and empennage module of SWEEP. Program listings and flow charts are included in the appendix to this volume.

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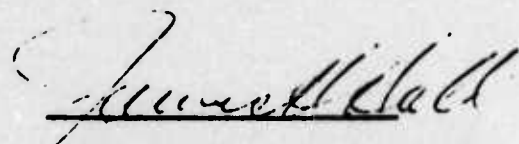

JAMES H. HALL, Colonel, USAF
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TABLE OF CONTENTS

Section	Page
INTRODUCTION TO VOLUME VI	27
<u>BOOK 1 - TECHNICAL DISCUSSION, SECTIONS I AND II</u>	29
I MODULE DESCRIPTION	31
General Description	31
Analysis Description	40
Analysis Options	49
Surface Types	49
General Data Processing Option	49
Torque-Box Design Option	52
Design Data Generation Option for the Flutter Optimization and Flexible Loads Analysis Programs	52
Design Features	54
Surface Geometry	54
Nonlinear Planforms	54
Cross-Sections	54
Torque-Box Description	56
Surface Configuration	57
Variable-Sweep Wing Designs	57
T-Tail Empennage Designs	57
Leading and Trailing Edge Structures	58
Miscellaneous Structure and Deadweight Mass Items	59
Secondary Structure	59
Tip Structure	59
Internal Fuel	59
External Concentrated Mass Items	60
Miscellaneous Internal Contents	60
Structural Design Data	61
Deadweight	61
Torsional Flutter Requirements	61
Design Loads	62

Section**Page**

Torque-box Design Synthesis	63
Construction Concepts	63
Torque-box Analysis Constants	64
Ultimate Allowable Stresses	64
Weight Calibration Factors	65
Torque-box Structure	65
Pivot Structure	65
Center-Section Structure	65
Leading Edge Structure	65
Trailing Edge Structure	66
Tip Structure	66
Secondary Structure	66
Module Structure	67
Module Execution	67
Execution of Metallic Torque-box Design Overlays	67
Module Storage Arrangement	81
Blank Common	81
Module/Overlay Data Requirements	81
Blank Common Initialization	81
Input Data	83
Output Data	83
Mass Storage File Records	83
Module Core Maps	97
Labeled Common Arrays	97
Blank Common Arrays	97

TABLE OF CONTENTS

Section	Page
II METHODOLOGY	257
Introduction	257
Lifting Surface Geometry	263
Planform Geometry	263
Cross-Sectional Geometry	268
Lifting Surface Design Data	274
Leading and Trailing Edge Structures	274
Nonstructural Wing Deadweight	280
Flutter Stiffness Requirements	284
Design Airloads	291
Material Properties	293
Initial Inertia Loads and Couple Arm Estimation	294
Structural Synthesis	297
Cover Design Loads	297
Torque-Box Synthesis	299
Metallic Torque-Box Analysis	300
Cover Synthesis	307
Intermediate Support Structure	315
Bending and Torsional Stiffness	321
Advanced Composite Torque-Box Analysis	322
General Behavior of Composite Laminates	322
Governing Relationships	324
Temperature Dependence of Properties	330
Stability	331
Stringer Columns	337
Full-Depth Honeycomb Sandwich	340

Section	Page
General Procedures	343
Multispar Analysis	349
Multirib Analysis	351
Bending and Torsional Stiffness	356
Pivot Structure Synthesis	357
Weight Analysis	358
Torque-Box Weight Analysis	358
Leading and Trailing Edge Weight Analysis	361
Estimation Equation Form	362
Fixed Leading Edge Structure	365
Leading Edge Control Devices	366
Fixed Trailing Edge Structure	368
Trailing Edge Control Devices	369
Basic Module Output	373
Design Data Generation Option	378
General Description	378
Program Description	378
Mass Properties and Design Data	
Processing Requirements	380
Structural Synthesis/Weight Analysis	
Reference System	383
Data for Flexible Loads Analysis Program	385
Data for Flutter Optimization Program	397
<u>BOOK 2 - TECHNICAL DISCUSSION, SECTIONS III AND IV</u>	<u>415</u>
III INPUT DATA PROCESSING AND GEOMETRY ANALYSIS	417
General Description	417
Overlay (8,0) Input Data	417
Overlay (8,0) Output Data	422
Overlay Core Maps	424
Variable Data Subarrays DLE, DTE, and DTC	434
TXV Array	454
YC and YTC Arrays, Overlay (8,0)	486
Output Data Arrays TD and TS	492

Section

Page

Subroutine Descriptions

503

Program OLAY8

503

Subroutine CCNTL

503

Subroutine CASE

510

Subroutine GEOMW

513

Subroutine GEOMC

521

Subroutine VSgeom

524

Subroutine TBWDC

527

Subroutine ABXC

534

Subroutine DMAX

537

Subroutine CAERO

540

Subroutine SWPXP

542

Subroutine PRTG

545

Subroutine GCOM

550

IV

SUBROUTINE REFERENCE TABLES FOR OVERLAYS (9,0), (10,0),
(14,0), (15,0), (16,0), (17,0), and (18,0)

552

BOOK 3 - TECHNICAL DISCUSSION, SECTION V

767

V

CORE MAPS FOR OVERLAYS (9,0), (10,0), (14,0), (15,0), (16,0),
(17,0), and (18,0)

769

REFERENCES

1097

Section	Page
APPENDIX A - GENERAL INFORMATION FOR MODULE FLOW CHARTS AND LISTINGS	1123
General Description	1123
Autoflow Description	1123
Cross Reference List	1128
Table of Diagnostics	1128
Flow Charts	1129
APPENDIX B - PROGRAM FLOW CHARTS, OVERLAYS (8,0), (14,0), (15,0), (16,0) AND (17,0)	1132
Overlay (8,0) - Input Data Processing and Geometry Analysis	1138
Program Table of Contents and References, and Table of Diagnostics	1139
Program Flow Charts	1153
Program ØLAY8	1154
Subroutine CCNTL	1157
Subroutine CASE	1166
Subroutine GEØMW	1170
Subroutine GEØMC	1180
Subroutine VSGEØM	1187
Subroutine TBWDC	1193
Subroutine ABØXC	1199
Subroutine DMAX	1203
Subroutine CAERØ	1208
Subroutine SWPXYF	1211
Subroutine PRTG	1214
Subroutine GCØMP	1219
Overlay (14,0) - Leading and Trailing Edge Structures, Weight and Mass Properties Analysis	1223
Program Table of Contents and References, and Table of Diagnostics	1225
Program Flow Charts	1239
Program ØLAY14	1240
Subroutine WLETE	1243
Subroutine GCNTL	1253

Section	Page
Subroutine LEWT	1264
Subroutine TEWT	1274
Subroutine TEDEV	1279
Subroutine TEWTI	1286
Subroutine LETEI	1295
Subroutine CTOT1	1309
Overlay (15,0) - Fuel, Contents and Concentrated Masses, Weight and Mass Properties Analysis	1315
Program Table of Contents and References, and Table of Diagnostics	1317
Program Flow Charts	1331
Program ØLAY15	1332
Subroutine WCØNT	1335
Subroutine MISCNT	1338
Subroutine MISCIT	1349
Subroutine CDL	1361
Subroutine FDIS	1370
Subroutine TBFWI1	1382
Subroutine CTØT2	1392
Subroutine PRTM	1397
Overlay (16,0) - Design Data for Torque-Box Analysis	1403
Program Table of Contents and References, and Table of Diagnostics	1405
Program Flow Charts	1419
Program ØLAY16	1420
Subroutine WDDATA	1423
Subroutine MTLCW	1428
Subroutine MTLFW	1432
Subroutine MTLPW	1437
Subroutine ALØAD	1440
Subroutine GJCAL	1448
Subroutine GJSI	1457
Subroutine GJTT	1460
Subroutine CNSTC	1465
Subroutine ABDW	1476
Subroutine YBSET	1481
Subroutine SS2	1488
Subroutine VLØAD1	1491

Section

Page

Overlay (17,0) - Data Generation and Output
Data Processing

1495

Program Table of Contents and References, and
Table of Diagnostics
Program Flow Charts

1497

1509

Program ØLAY17

1510

Subroutine WØDATA

1513

Subroutine PRTD

1525

Subroutine TBFWI

1537

Subroutine WFLDD

1547

Subroutine WFDD

1552

Subroutine TPINT

1563

Subroutine CTØT

1568

Subroutine PINTØ

1573

APPENDIX C - PROGRAM FLOW CHARTS, OVERLAYS (9,0) AND (10,0)

1603

Overlay (9,0) - Torque-Box Structural Synthesis/
Weight Analysis for Metallic Designs - No. 1

1607

Program Table of Contents and References, and
Table of Diagnostics
Program Flow Charts

1609

1621

Program ØLAY9

1622

Subroutine PRØG

1625

Subroutine DWYBA

1633

Subroutine DEADW

1638

Subroutine VLØAD

1642

Subroutine TBØPT

1646

Subroutine PIVØT

1660

Subroutine THE

1672

Subroutine TEL

1676

Subroutine CSECW

1680

Subroutine DLPVT

1684

Subroutine PRTA

1693

Subroutine PRTH

1703

Overlay (10,0) - Torque-Box Structural Synthesis/
Weight Analysis for Metallic Designs - No. 2

1709

Program Table of Contents and References, and
Table of Diagnostics

1710

Program Flow Charts s

1733

Program ØLAY10	1734
Subroutine CNSTR	1737
Subroutine SECTD	1748
Subroutine SFSCH	1761
Subroutine BØT	1780
Subroutine BØTC	1791
Subroutine TSCH	1795
Subroutine STBAR	1811
Subroutine STRG	1817
Subroutine STRGØ	1833
Subroutine STRIL	1837
Subroutine STRIB	1842
Subroutine SRRIB	1848
Subroutine STWEB	1851
Subroutine SKWEB	1857
Subroutine EIGJC	1860
Subroutine VFCAL	1865
Subroutine WTCAL	1871
Subroutine BHDJT	1878
Subroutine RTRIB	1887
Subroutine WTPIN	1890
Subroutine CG3P	1894
Subroutine SS	1899
Subroutine PRTB	1902
Subroutine PRTC	1907
Subroutine PRTBK	1911

APPENDIX D - PROGRAM FLOW CHARTS, OVERLAY (18,0)

1939

Overlay (18,0) - Torque-Box Structural Synthesis/
Weight Analysis for Advanced Composite Designs

1941

Program Table of Contents and References, and
Table of Diagnostics
Program Flow Charts

1943

1969

Program ØLAY18	1970
Subroutine ATBØPT	1973
Subroutine ACLØAD	1982
Subroutine TEMPC	1990
Subroutine AVLOAD	1996
Subroutine ACPRØG	2000
Subroutine CKSTAB	2006

Subroutine ACWMS	2012
Subroutine ACWFDH	2027
Subroutine CKSFDH	2034
Subroutine WEIGH1	2038
Subroutine ACWRBS	2044
Subroutine ACWSTR	2057
Subroutine ACMRSK	2074
Subroutine ACSTRG	2079
Subroutine WEIGH2	2086
Subroutine ASTIFF	2090
Subroutine ACEIGJ	2096
Subroutine ACNSTR	2100
Subroutine ACPRTA	2111
Function XN	2123
Subroutine WTCAL	2126
Subroutine BHDJT	2128
Subroutine RTRIB	2130
Subroutine WTPIN	2132
Subroutine DWYBA	2134
Subroutine DEADW	2136
Subroutine CSECW	2138
Subroutine PIVOT	2140
Subroutine TEE	2142
Subroutine TEL	2144
Subroutine DLPVT	2146
Subroutine PRTB	2148
Subroutine PRTC	2150
Subroutine PRTH	2152

APPENDIX E - PROGRAM LISTINGS, OVERLAYS (8,0), (14,0), (15,0), (16,0)
AND (17,0)

2179

Overlay (8,0) - Input Data Processing and Geometry
Analysis

2185

Program OLAY8	2186
Subroutine CCNTL	2186
Subroutine CASE	2193
Subroutine GEOMW	2195
Subroutine GEOMC	2203
Subroutine VSgeom	2207
Subroutine TBWDC	2212
Subroutine ABXC	2216
Subroutine DMAV	2218

Section

Page

Subroutine CAERO	2220
Subroutine SWPYYP	2220
Subroutine PRTG	2221
Subroutine GOOMP	2224

Overlay (14,0) - Leading and Trailing Edge Structures, Weight and Mass Properties Analysis 2229

Program ØLAY14	2230
Subroutine WLETE	2230
Subroutine GCNTL	2234
Subroutine LEWT	2240
Subroutine TEWT	2246
Subroutine TEDEV	2249
Subroutine TEWTI	2253
Subroutine LETEI	2259
Subroutine CTØT1	2266

Overlay (15,0) - Fuel, Contents and Concentrated Masses, Weight and Mass Properties Analysis 2269

Program ØLAY15	2270
Subroutine WCØNT	2270
Subroutine MISCNT	2271
Subroutine MISCIT	2278
Subroutine CDL	2286
Subroutine FDIS	2291
Subroutine TBFWI1	2299
Subroutine CTØT2	2305
Subroutine PRM	2307

Overlay (16,0) - Design Data for Torque-Box Analysis 2309

Program ØLAY16	2310
Subroutine WDDATA	2310
Subroutine MTLCW	2313
Subroutine MTLFW	2315
Subroutine MTLPW	2318
Subroutine ALØAD	2319
Subroutine GJCAL	2324
Subroutine GJSI	2330
Subroutine GJTT	2331
Subroutine CNSTC	2333
Subroutine ABDW	2339

Section

Page

Subroutine YBSET	2341
Subroutine SS2	2344
Subroutine VLØAD1	2345

Overlay (17,0) - Data Generation and Output Data Processing	2349
---	------

Program ØLAY17	2350
Subroutine WØDATA	2350
Subroutine PRTD	2359
Subroutine TBFWI	2367
Subroutine WFLDD	2373
Subroutine WVFDD	2376
Subroutine TPINT	2385
Subroutine CTØT	2387
Subroutine PINTØ	2389

APPENDIX F - PROGRAM LISTINGS, OVERLAYS (9,0), (10,0) AND (18,0)	2417
--	------

Overlay (9,0) - Torque-Box Structural Synthesis/ Weight Analysis for Metallic Designs - No. 1	2423
--	------

Program ØLAY9	2424
Subroutine PRØG	2424
Subroutine DWYBA	2429
Subroutine DEADW	2432
Subroutine VLØAD	2434
Subroutine TBØPT	2436
Subroutine PIVØT	2443
Subroutine TEE	2450
Subroutine TEL	2452
Subroutine CSECW	2453
Subroutine DLPVT	2455
Subroutine PRTA	2461
Subroutine PRTH	2466

Overlay (10,0) - Torque-Box Structural Synthesis/ Weight Analysis for Metallic Designs - No. 2	2469
---	------

Program ØLAY10	2470
Subroutine CNSTR	2470
Subroutine SECTD	2477
Subroutine SFSCB	2485
Subroutine BØT	2494
Subroutine BØTC	2497

Section

Page

Subroutine TSCH	2498
Subroutine STBAR	2507
Subroutine STRG	2509
Subroutine STRGØ	2514
Subroutine STRIL	2516
Subroutine STRIB	2518
Subroutine SRRIB	2520
Subroutine STWEB	2521
Subroutine SKWEB	2523
Subroutine EIGJC	2524
Subroutine VFCAL	2528
Subroutine WTCAL	2531
Subroutine BHDJT	2537
Subroutine RTRIB	2541
Subroutine WTPIN	2542
Subroutine CG3P	2544
Subroutine SS	2545
Subroutine PRTB	2546
Subroutine PRTC	2548
Subroutine PRTBK	2550

Overlay (18,0) - Torque-Box Structural Synthesis/ Weight Analysis for Advanced Composite Designs	2553
---	------

Program ØLAY18	2554
Subroutine ATBØPT	2554
Subroutine ACLØAD	2561
Subroutine TEMPC	2566
Subroutine AVIØAJ	2569
Subroutine ACPRØG	2572
Subroutine CKSTAB	2577
Subroutine ACWMS	2580
Subroutine ACWFDH	2590
Subroutine CKSFDH	2594
Subroutine WEIGH1	2595
Subroutine ACWRBS	2598
Subroutine ACWSTR	2606
Subroutine ACMRSK	2615
Subroutine ACSTRG	2619
Subroutine WEIGH2	2622
Subroutine ASTIFF	2624
Subroutine ACEIGJ	2629
Subroutine ACNSTR	2632
Subroutine ACPRTA	2642
Function XN	2650

Section

Page

Subroutine WTCAL	2650
Subroutine BNDJT	2650
Subroutine RTRIB	2651
Subroutine WTPIN	2651
Subroutine DWYRA	2651
Subroutine DEADW	2651
Subroutine CSECW	2651
Subroutine PIVOT	2651
Subroutine TEE	2652
Subroutine TEL	2652
Subroutine DLJVT	2652
Subroutine PRTB	2652
Subroutine PRTC	2652
Subroutine PRTH	2653

LIST OF ILLUSTRATIONS

Figure	Title	Page
1	Wing and Empennage Module, Overlay Execution Flow Diagram.	33
2	Overlay (8,0) - Input Data Processing and Geometry Analysis	68
3	Overlay (14,0) - Leading and Trailing Edge Structures, Weight and Mass Properties Analysis.	69
4	Overlay (15,0) - Fuel, Contents and Concentrated Masses, Weight and Mass Properties Analysis.	70
5	Overlay (16,0) - Design Data for Torque-box Analysis . . .	71
6	Overlay (9,0) - Torque-box Structural Synthesis/Weight Analysis for Metallic Designs - No. 1.	72
7	Overlay (10,0) - Torque-box Structural Synthesis/Weight Analysis for Metallic Designs - No. 2.	73
8	Overlay (18,0) - Torque-box Structural Synthesis/Weight Analysis for Advanced Composite Designs.	74
9	Overlay (17,0) - Data Generation and Output Data Processing	75
10	Weight Summary, Wing Group	84
11	Weight Summary, Horizontal Tail Group.	86
12	Weight Summary, Vertical Tail Group.	88
13	General Program Functional Flow Diagram.	259
14	Logic and Execution Subroutine Flow Diagram for Lifting Surface Structural Weight Estimation Module. . .	260
15	Structural Synthesis/Weight Analysis Reference System and Weight Integration	261
16	Idealized Lifting Surface Planform	264
17	Blended Wing Planform.	267
18	Idealized Box Section.	269
19	Blended Wing Torque-Box Geometry	270
20	Blended Wing Normalized Geometry	271
21	Variable-Sweep Wing Geometry Idealization.	273
22	Mass Properties Integration Grid System.	275
23	Leading Edge Structure Weight Distribution	278
24	Leading Edge Structure Chordwise Weight Distribution . . .	279
25	Trailing Edge Structure Chordwise Weight Distribution. . .	281
26	Wing Fuel Distribution	282
27	Contents Weight Distribution	285
28	Externally Mounted Component Description	286
29	Loads Rotation and Translation	292
30	Typical Material Stress-Strain Curve and Evaluation Data	295
31	Effective Structural Width Idealization.	298

Figure		Page
32	Multirib Stringer Design Options	301
33	Multispar Design Options	302
34	First Search Level, Multirib or Multispar Construction . .	305
35	Second Search Level, Multirib.	305
36	Interpolation Scheme for Stress Level.	309
37	Stringer-Column Geometry	313
38	Composite-Ply Orientations	323
39	Laminate Configuration	324
40	Advanced Composite Structures Checked for Stability. . . .	332
41	Torque-Box Cross Section	344
42	Logic and Computational Flow Diagram for Total Multirib Torque-Box Optimization, Subroutine ACWRBS	352
43	Logic and Computational Flow Diagram for Synthesis of Stringer Stiffened Covers, Subroutine ACWSTR	353
44	Logic and Computational Flow Diagram for Skin/Stringer Load and Skin Stability, Subroutine ACNRSK	354
45	Stringer Types for Multirib Torque-Box Covers.	355
46	Leading and Trailing Edge Control Geometry	363
47	Geometry Description for Trailing Edge Device No. 3, 4, and 5 - Trailing Edge Flaps.	370
48	Lifting Surface Component Weight Summary	374
49	Torque-Box Weight Summary, Page 1.	375
50	Torque-Box Weight Summary, Page 2, Pivot Type.	376
51	Flutter, Flexible Airloads, Weight Optimization Design Loop (Stand-Alone Programs).	379
52	Flexible Loads Analysis Mass Distribution and Integration Reference System	381
53	Flutter Optimization Analysis Mass Distribution and Integration Reference System	382
54	Structural Synthesis/Weight Analysis Reference System and Weight Integration.	384
55	Mass Properties Integration Grid System.	386
56	Overlay (8,0), Input Data Processing and Geometry Analysis	420
57	Overlay (8,0), Logic Flow Diagram.	421
58	Geometry Summary Data - Page 1	546
59	Geometry Summary Data - Page 2	547
60	Geometry Summary Data - Swept Platform Position.	548

LIST OF TABLES

Table	Title	Page
1	Subprogram List, Wing and Empennage Module	34
2	Wing and Empennage Module Overlay Subprogram List.	76
3	Overlay Blank Common Requirements.	82
4	Mass Storage File 1 Records, Wing and Empennage Module . . .	90
5	FDAT Array, Final Output Data.	98
6	XMISC Array.	100
7	IP Array, Print Control Data	104
8	D Array, Input Variable Data	109
9	ND Array	191
10	DC Array, Miscellaneous Constants.	202
11	Array References, Array D.	209
12	D Array Variables Cross-Reference List	231
13	Array References, Array ND	243
14	Array References, Array DC	255
15	Torque-Box Elements, Section Stiffness Calculations.	356
16	Sample Wing Torque-Box Program Calibration and Weight Index Coefficients	359
17	Flap-Type Indicator and Correlation Coefficients	372
18	Torque-Box Summary Page Line Item Definitions.	377
19	External References, Overlay (8,0) Routines.	418
20	WD Array, Wing and Empennage Variable Data, Mass Storage File 1, Record 21	425
21	SPAL Array, Wing and Empennage Flutter Analysis Data, Mass Storage File 1, Record 38	430
22	DLE Array, Variable Data Subarray for Nonlinear Leading Edges.	436
23	DTE Array, Variable Data Subarray for Nonlinear Trailing Edges	438
24	DTC Array, Variable Data Subarray for Nonlinear Thickness Ratios	440
25	DAF Array, Airfoil Cross-Section Data.	442
26	Polynomial Coefficients of Properties of Normalized Airfoils.	448
27	Airfoil Ordinates.	449
28	AFD Array.	450
29	TAF Array, Airfoil Depth Data.	451
30	TXY Array, Geometry Data	455
31	YTB Array, Torque-Box Geometry Data.	460
32	YLE Array, Leading Edge Geometry Data.	462
33	YTE Array, Trailing Edge Geometry Data	463
34	T Array, Locations 1-200, 489-553.	464
35	TVS Array.	470

Table	Title	Page
36	TGJ Array, Flutter Analysis Data	482
37	TFRDK Array, Geometry Array for Mass Properties Calculations	485
38	YC Array, Overlay (8,0).	487
39	YTC Array.	490
40	TD Array, Printed Output Geometry Data	493
41	TS Array	500
42	Data Source Matrix for Adjustment of Variable Data, Array D.	505
43	Variable References, Subroutine CCNTL.	509
44	Variable References, Subroutine CASE	512
45	TT Array, GEOMW.	516
46	Variable References, Subroutine GEOMW.	518
47	Variable References, Subroutine GEOMC.	523
48	Variable References, Subroutine VSGEOM	526
49	Variable References, Subroutine TBWDC.	530
50	TR Array, TBWDC.	531
51	TT Array, TBWDC and AB0XC.	532
52	Variable References, Subroutine AB0XC.	536
53	Variable References, Subroutine DMAX	539
54	Variable References, Subroutine CAERO.	541
55	Variable References, Subroutine SWPXYP	544
56	Variable References, Subroutine PRTG	549
57	Variable References, Subroutine GC0MP.	551
58	Cross-Reference List for Subroutine Variable Reference Tables	553
59	External References, Overlay (14,0) Routines	556
60	External References, Overlay (15,0) Routines	557
61	External References, Overlay (16,0) Routines	558
62	External References, Overlay (9,0) Routines	560
63	External References, Overlay (10,0) Routines	562
64	External References, Overlay (18,0) Routines	565
65	External References, Overlay (17,0) Routines	569
66	Variable References, Subroutine WLETE.	570
67	Variable References, Subroutine GCNTL.	571
68	Variable References, Subroutine LEWT	572
69	Variable References, Subroutine TEWT	574
70	Variable References, Subroutine TEWTI.	575
71	Variable References, Subroutine TEDEV.	576
72	Variable References, Subroutine LETEI.	577
73	Variable References, Subroutine WC0NT.	579
74	Variable References, Subroutine MISCNT	580
75	Variable References, Subroutine MISCIT	582
76	Variable References, Subroutine CDL.	584
77	Variable References, Subroutine FDIS	586
78	Variable References, Subroutine PRTM	588

Table	Title	Page
79	Variable References, Subroutine WDDATA.	589
80	Variable References, Subroutine MTLCW	592
81	Variable References, Subroutine MTLFW	593
82	Variable References, Subroutine MTLPW	594
83	Variable References, Subroutine ALDAD	595
84	Variable References, Subroutine GJCAL	598
85	Variable References, Subroutine GJSI.	601
86	Variable References, Subroutine GJTT.	602
87	Variable References, Subroutine CNSTC	605
88	Variable References, Subroutine ABDW	608
89	Variable References, Subroutine YBSET	611
90	Variable References, Subroutine PRQG	613
91	Variable References, Subroutine DEADW	617
92	Variable References, Subroutine DWYBA	619
93	Variable References, Subroutine VLAD	621
94	Variable References, Subroutine TBPT	624
95	Variable References, Subroutine CSECW	626
96	Variable References, Subroutine PIVOT	627
97	Variable References, Subroutine TEE	631
98	Variable References, Subroutine TEL	632
99	Variable References, Subroutine DLPVT	633
100	Variable References, Subroutine PRTA.	635
101	Variable References, Subroutine PRTH.	637
102	Variable References, Subroutine CNSTR	638
103	Variable References, Subroutine SECTD	641
104	Variable References, Subroutine SFSCH	644
105	Variable References, Subroutine BOT	646
106	Variable References, Subroutine BOTC.	647
107	Variable References, Subroutine TSCH.	648
108	Variable References, Subroutine STBAR	650
109	Variable References, Subroutine STRG.	651
110	Variable References, Subroutine STRQ	652
111	Variable References, Subroutine STRIL	653
112	Variable References, Subroutine STRIB	654
113	Variable References, Subroutine SRRIB	655
114	Variable References, Subroutine STWEB	656
115	Variable References, Subroutine SKWEB	657
116	Variable References, Subroutine VFCAL	658
117	Variable References, Subroutine EIGJC	659
118	Variable References, Subroutine WTCAL	660
119	Variable References, Subroutine BHDJT	662
120	Variable References, Subroutine RTRIB	663
121	Variable References, Subroutine WTPIN	664
122	Variable References, Subroutine SS.	665
123	Variable References, Subroutine CG3P.	666
124	Variable References, Subroutine PRTB.	667

Table	Title	Page
125	Variable References, Subroutine PRTBK	668
126	Variable References, Subroutine PRTC.	669
127	Variable References, Subroutine ACPRØG.	670
128	Variable References, Subroutine ACLØAD.	674
129	Variable References, Subroutine TEMPC	676
130	Variable References, Subroutine AVLØAD.	678
131	Variable References, Subroutine ATBØPT.	681
132	Variable References, Subroutine ACNSTR.	685
133	Variable References, Subroutine ACWMS	689
134	Variable References, Subroutine CKSTAB.	693
135	Variable References, Subroutine WEIGH1.	696
136	Variable References, Subroutine ACWFDH.	698
137	Variable References, Subroutine CKSFDH.	700
138	Variable References, Subroutine ACWRBS.	702
139	Variable References, Subroutine ACWSTR.	706
140	Variable References, Subroutine ACMRSK.	712
141	Variable References, Subroutine ACSTRG.	716
142	Variable References, Subroutine WEIGH2.	718
143	Variable References, Subroutine ASTIFF.	720
144	Variable References, Subroutine ACEIGJ.	723
145	Variable References, Function XN	724
146	Variable References, Subroutine ACPRTA.	725
147	Variable References, Subroutine WØDATA.	729
148	Variable References, Subroutine PRTD.	732
149	Variable References, Subroutine TBFWI	734
150	Variable References, Subroutine WFLDD	735
151	Variable References, Subroutine WVFDD	737
152	Variable References, Subroutine TPINT	740
153	Variable References, Subroutine PINTØ	741
154	Variable References, Subroutine CTØT	742
155	Cross-Reference List for Array Core Maps.	770
156	DLE Array, Variable Data Subarray for Fixed Leading Edge Structures	774
1 7	DTE Array, Variable Data Subarray for Fixed Trailing Edge Structures.	776
158	DLED1 Array, Variable Data Subarray for Leading Edge Control Surfaces.	778
159	DLEDK Array, Variable Data Subarray, Leading Edge Control Surface Analysis Constants	781
160	DTED1 Array, Variable Data Subarray for Trailing Edge Control Surfaces, Spoilers.	783

Table	Title	Page
161	DTED2 Array, Variable Data Subarray for Trailing Edge Flap-Type Control Surfaces	786
162	DSPDK Array, Variable Data Subarray, Spoiler Control Surface Analysis	793
163	DFLPK Array, Variable Data Subarray, Trailing Edge Flap Control Surface Analysis	794
164	DAILK Array, Variable Data Subarray, Aileron, Elevator, and Rudder Control Surface Analysis.	795
165	DFSP Array, Variable Data Subarray, TE Flap-Type Control Surface Support Structure Distribution Constants	797
166	TG Array	799
167	TGA Array	802
168	YC Array, Overlays (14,0), (15,0), and (17,0).	804
169	TWG Array	807
170	CCW Array	814
171	CCI, CCL, and CCT Arrays, Overlay (14,0)	818
172	TCS Array, Overlay (14,0).	823
173	CKD Array, Subroutine LETEI	826
174	CLEI and CTEI Arrays	827
175	CIØY Array	829
176	TGR Array, Subroutine LEWT	831
177	TST Array, Subroutine LEWT	834
178	TTEI Array	836
179	TST Array, Subroutine TEWTI and TEDEV.	839
180	TGR Array, Subroutine TEWT and TEWTI	845
181	TGR Array, Subroutine LETEI.	849
182	TST Array, Subroutine LETEI.	852
183	TE Array	855
184	TST Array, Subroutine WLETE.	857
185	CMII Array	859
186	CCILI Array, Overlays (15,0), (16,0), and (17,0)	862
187	CFLI1 and CFL2I Arrays	868
188	CKD Array, Overlay (15,0).	870
189	TVMT Array	873
190	T Array, Locations 201-900	876
191	Subroutine References for T(201)-T(900) Variables.	884
192	TVF Array	891
193	CTBW Array	898
194	CTBI Array	901
195	WCG Array	904
196	ACL Array	905
197	ACLT Array	908
198	ACVMT and V Arrays	909
199	TEIGJ Array.	911
200	ENQ Array	912

Table	Title	Page
201	ENQC Array	914
202	CNT Array.	916
203	STRESS Array	920
204	ENX Array.	922
205	EL Array	924
206	IEL Array.	927
207	SPB Array.	929
208	SPN Array.	931
209	TF Array	932
210	W Array, Subroutine WEIGH1	935
211	TX Array	937
212	TXS Array.	943
213	STRING Array	946
214	W Array, Subroutine WEIGH2	949
215	TSF Array.	951
216	TA Array	955
217	CD Array, Locations 1-400, Stiffness Data Arrays	957
218	TDC Array, Overlay (18,0).	961
219	DDUC and DDLC Arrays	968
220	DDIS Array	970
221	DDFS and DDRS Arrays	972
222	DDSTR Array.	974
223	DSPLØ Array, Analysis Constants.	977
224	TDC Array, Overlays (9,0) and (10,0)	978
225	TSC Array.	990
226	TSEC Array	998
227	TSS Array, Subroutines SFSCH and TSCH.	1006
228	TSS Array, Subroutine STRIB.	1014
229	TSS Array, Subroutine STWEB.	1017
230	TWT Array, Locations 1-330, Weight Analysis Data and Constants.	1020
231	TWT Array, Locations 331-400, Section Weight Per Inch Data, Subroutine WTPIN.	1047
232	TWT Array, Locations 331-400, Center-Section Weight Data, Subroutine CSECW	1053
233	TWT Array, Locations 1 Through 50 and 331 Through 400, Torque-Box Weight Increment Data for Pivot Designs, Subroutine DLPVT.	1057
234	PT Array, Subroutine PIVØT	1065
235	S Array, Subroutine PIVØT.	1075
236	TSS Array, Total Weight Summary Data, Subroutines TBØPT and ATBØPT	1083
237	TØ Array, Subroutines TBØPT and ATBØPT	1094

LIST OF TABLES

Table	Title	Page
A-1	Appendix References for Wing and Empennage Module Routines. . .	1124
B-1	Appendix References for Overlay (8,0) Routines.	1133
B-2	Appendix References for Overlay (14,0) Routines	1134
B-3	Appendix References for Overlay (15,0) Routines	1135
B-4	Appendix References for Overlay (16,0) Routines	1136
B-5	Appendix References for Overlay (17,0) Routines	1137
C-1	Appendix References for Overlay (9,0) Routines.	1604
C-2	Appendix References for Overlay (10,0) Routines	1605
D-1	Appendix References for Overlay (18,0) Routines	1940
E-1	Appendix References for Overlay (9,0) Routines.	2180
E-2	Appendix References for Overlay (14,0) Routines	2181
E-3	Appendix References for Overlay (15,0) Routines	2182
E-4	Appendix References for Overlay (16,0) Routines	2183
E-5	Appendix References for Overlay (17,0) Routines	2184
F-1	Appendix References for Overlay (9,0) Routines.	2419
F-2	Appendix References for Overlay (10,0) Routines	2420
F-3	Appendix References for Overlay (18,0) Routines	2421

APPENDIX A

GENERAL INFORMATION FOR MODULE FLOW CHARTS AND LISTINGS

GENERAL DESCRIPTION

Flow charts and listings for the wing and empennage module subprograms are contained in Appendixes B through F of this volume. Flow charts for the eight module overlays are presented in three separate books: Appendixes B, C, and D. Listings are contained in two books: Appendixes E and F. The contents of each appendix are:

- Appendix B: Program flow charts for overlays (8,0), (14,0), (15,0), (16,0), and (17,0).
- Appendix C: Program flow charts for overlays (9,0) and (10,0).
- Appendix D: Program flow charts for overlay (18,0).
- Appendix E: Program listings for overlays (8,0), (14,0), (15,0), (16,0), and (17,0).
- Appendix F: Program listings for overlays (9,0), (10,0), and (18,0).

The 128 subprograms for the wing and empennage module are listed in Table A-1. Each subprogram in this list is identified by overlay and appendix location for flow charts and listings. Similar summary tables for each overlay are included in Appendixes B through F.

Subprogram flow charts and listings contained in Appendixes B through F were created by the AUTOFLOW documentation system. They are automatically generated from program source decks as CRT outputs for each overlay of the module.

AUTOFLOW DESCRIPTION

AUTOFLOW output for each of the module overlays consists of two separate blocks of CRT outputs:

1. Listing of all program source cards, outputted as an 80-column listing, each card sequenced and grouped by routine in the overlay.
2. Program flow chart oriented output. The flow chart outputs contain overlay cross-reference information and flow charts for each subprogram included in the overlay.

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TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
ABDW	16	1476	2339
ABØXC	8	1199	2216
ACEIGJ	18	2096	2629
ACLØAD	18	1982	2561
ACMRSK	18	2074	2615
ACNSTR	18	2100	2632
ACPRØG	18	2000	2572
ACPRTA	18	2111	2642
ACSTRG	18	2079	2619
ACWFDH	18	2027	2590
ACWMS	18	2012	2580
ACWRBS	18	2044	2598
ACWSTR	18	2057	2606
ALØAD	16	1440	2319
ASTIFF	18	2090	2624
ATBØPT	18	1973	2554
AVLØAD	18	1996	2569
BHDJT	10	1878	2537
BHDJT	18	2128	2650
BØT	10	1780	2494
BØTC	10	1791	2497
CAERØ	8	1208	2220
CASE	8	1166	2193
CCNTL	8	1157	2186
CDL	15	1361	2286
CG3P	10	1894	2544
CKSFDH	18	2054	2594
CKSAB	18	2006	2577
CNSTC	16	1465	2333
CNSTR	10	1737	2470
CSECW	9	1680	2453
CSECW	18	2138	2651
CTØT	17	1568	2350
CTØT1	14	1309	2266
CTØT2	15	1392	2305
DEADW	10	1638	2432
DEADW	18	2136	2651

TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES (CONT)

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
DLPVT	9	1684	2455
DLPVT	18	2146	2652
DMAX	8	1203	2218
DWYBA	10	1633	2429
DWYBA	18	2134	2651
EIGJC	10	1860	2524
FDIS	15	1370	2291
GCNTL	14	1253	2234
GCØMP	8	1219	2224
GEØMC	8	1180	2203
GEØMW	8	1170	2195
GJCAL	16	1448	2324
GJSI	16	1457	2330
GJTT	16	1460	2331
LETEI	14	1295	2259
LEWT	14	1264	2240
MISCIT	15	1349	2278
MISCNT	15	1338	2271
MTLCW	16	1428	2313
MTLFW	16	1432	2315
MTLPW	16	1437	2318
ØLAY8	8	1154	2186
ØLAY9	9	1622	2424
ØLAY10	10	1734	2470
ØLAY14	14	1240	2230
ØLAY15	15	1332	2270
ØLAY16	16	1420	2310
ØLAY17	17	1510	2350
ØLAY18	18	1970	2554
PINTØ	17	1573	2389
PIVØT	9	1660	2443
PIVØT	18	2140	2651
PRØG	9	1625	2424
PRTA	9	1693	2461
PRTB	10	1902	2546
PRTB	18	2148	2652
PRTBK	10	1911	2550

TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES (CONT)

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
PRTC	10	1907	2548
PRTC	18	2150	2652
PRTD	17	1525	2359
PRTG	8	1214	2221
PRTH	9	1703	2466
PRTH	18	2152	2653
PRTM	15	1397	2307
RTRIB	10	1887	2541
RTRIB	18	2130	2651
SECTD	10	1748	2477
SFSCH	10	1761	2485
SKWEB	10	1857	2523
SRRIB	10	1848	2520
SS	10	1899	2545
SS2	16	1488	2344
STBAR	10	1811	2507
STRG	10	1817	2509
STRGØ	10	1833	2514
STRIB	10	1842	2518
STRIL	10	1837	2516
STWEB	10	1851	2521
SWPXYP	8	1211	2220
TBFWI	17	1537	2367
TBFWI1	15	1382	2299
TBØPT	9	1646	2436
TBWDC	8	1193	2212
TEDEV	14	1279	2249
TEL	9	1672	2450
TEE	18	2142	2652
TEL	9	1676	2452
TEL	18	2143	2652
TEMPC	18	1990	2566
TEWT	14	1274	2246
TEWTI	14	1286	2253
TPINT	17	1563	2385
TSCH	10	1795	2498
VFCAL	10	1865	2528

TABLE A-1. APPENDIX REFERENCES FOR WING AND EMPENNAGE MODULE ROUTINES (CONCL)

Routine	Overlay	Appendix Reference Pages	
		Program Flow Charts	Program Listings
VLAD	9	1642	2434
VLAD1	16	1491	2345
VSCEM	8	1187	2207
WCNT	15	1335	2270
WDDATA	16	1423	2310
WEIGH1	18	2038	2595
WEIGH2	18	2086	2622
WFLDD	17	1547	2373
WLETE	14	1243	2230
WDATA	17	1513	2350
WTCAL	10	1871	2531
WTCAL	18	2126	2650
WTPIN	10	1890	2542
WTPIN	18	2132	2651
WVFDD	17	1552	2376
XN	18	2123	2650
YBSET	16	1481	2341

CROSS-REFERENCE LIST

The cross-reference list consists of separate lists for procedural and nonprocedural FORTRAN statements. All procedural statement references are summarized in the output table of contents and references, showing all interconnections that appear in the flow charts. Summary information outputted consists of the following from left to right:

- Source card identification, columns 73 through 80 identification or internal card sequence number. When the internal card sequence number is used, it is enclosed in parentheses.
- Flow chart page and box number where card information is displayed.
- FORTRAN statement number from columns 1 through 5.
- Card identification of all source cards referring to the listed card.
- Flow chart display page and box numbers for all source cards referring to the listed card.

Nonprocedural statements are summarized with the flow chart information of each subprogram. They are listed on the last flow chart page for the subprogram. FORTRAN statements summarized include TYPE, DIMENSION, EQUIVALENCE, COMMON, FORMAT, and DATA statements.

Introductory comments are listed on the first flow chart page of each subprogram, consisting of all source comment cards placed before the subprogram name card.

TABLE OF DIAGNOSTICS

The table of diagnostics are outputted after the table of contents and references. This table is included in Appendixes B, C, and D for each overlay. The information contained in this table identifies all cards where calls to library routines READMS and WRITMS are made, all listed as

unidentified external references. The table also identifies all BUFFER IN and BUFFER OUT statements as nonrecognizable syntax. This is due to the AUTOFLOW documentation system, which is IBM-oriented. However, these statements are correctly displayed in the flow charts.

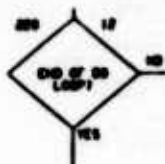
FLOW CHARTS

The flow charts produced by AUTOFLOW use USASI conventional symbols. Since the flow charts are mechanically drawn from the program source deck, there are no omissions or vague generalizations about the processing within the boxes.

Every box on each page is uniquely numbered and may be referred to from elsewhere in the program. The source of a reference to a box will be indicated by showing the page and box number. If the number is followed by an asterisk, there are multiple references to this point, and the others may be found by using the cross-reference list.



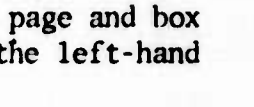
The most-often-used symbol is the decision box. Like all boxes, its box number is above and to the right of the box. Its FORTRAN statement number is above and to the left of the box. The decision choices for the paths are printed.



The unconditional transfer connector has its page number destination printed above or to the left of the box number destination within the connector. If there is a FORTRAN statement number at the destination, it is printed below the connector.



page and box



the left-hand

The computed GØ TØ becomes a branch table showing the page and box number of each of the ordered brances.

COMPUTED GO TO FOR 100	
10 20	20.00 20.12

The column connectors and initial connectors are the only boxes without external box numbers. The function of the initial connector is always clear, but the label given is the symbol in the next FORTRAN card, which is often blank.



The column connector identifies the page and box number to which it connects.



APPENDIX B

PROGRAM FLOW CHARTS, OVERLAYS
(8,0), (14,0), (15,0), (16,0) AND (17,0)

TABLE B-1. APPENDIX REFERENCES FOR OVERLAY (8,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY8	1154	2186
ABØXC	1199	2216
CAERØ	1208	2220
CASE	1166	2193
CCNTL	1157	2186
DMAX	1203	2218
GOØMP	1219	2224
GEØMC	1180	2203
GEØMW	1170	2195
PRTG	1214	2221
SWPXYP	1211	2220
TBWDG	1193	2212
VSGEØM	1187	2207

TABLE B-2. APPENDIX REFERENCES FOR OVERLAY (14,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY14	1240	2230
CTØT1	1309	2266
GCNTL	1253	2234
LETEI	1295	2259
LEWT	1264	2240
TEDEV	1279	2249
TEWT	1274	2246
TEWTI	1286	2253
WLETE	1243	2230

TABLE B-3. APPENDIX REFERENCES FOR OVERLAY (15,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY15	1332	2270
CDL	1361	2286
CTØT2	1392	2305
FDIS	1370	2291
MISCIT	1349	2278
MISCNT	1338	2271
PRTM	1397	2307
TBFWI1	1382	2299
WCØNT	1335	2270

TABLE B-4. APPENDIX REFERENCES FOR OVERLAY (16,0) routines

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY16	1420	2310
ABDW	1476	2339
ALØAD	1440	2319
CNSTC	1465	2333
GJCAL	1448	2324
GJSI	1457	2330
GJTT	1460	2331
MTLCW	1428	2313
MTLFW	1432	2315
MTLPW	1437	2318
SS2	1488	2344
VLØAD1	1491	2345
WDDATA	1423	2310
YBSET	1481	2341

TABLE B-5. APPENDIX REFERENCES FOR OVERLAY (17,0) ROUTINES

Routine	Appendix Reference Pages	
	Program Flow Charts	Program Listings
ØLAY17	1510	2350
CTØT	1568	2387
PINTØ	1573	2389
PRTD	1525	2359
TBFWI	1537	2367
TPINT	1563	2385
WFLDD	1547	2373
WØDATA	1513	2350
WVFDD	1552	2376

TABLE 1. SUMMARY OF INPUT DATA FOR OVERLAY (8,0)

INPUT DATA	OVERLAY (8,0)	OVERLAY (8,0)	OVERLAY (8,0)
1. INPUT DATA	2. OVERLAY (8,0)	3. OVERLAY (8,0)	4. OVERLAY (8,0)
5. INPUT DATA	6. OVERLAY (8,0)	7. OVERLAY (8,0)	8. OVERLAY (8,0)
9. INPUT DATA	10. OVERLAY (8,0)	11. OVERLAY (8,0)	12. OVERLAY (8,0)
13. INPUT DATA	14. OVERLAY (8,0)	15. OVERLAY (8,0)	16. OVERLAY (8,0)
17. INPUT DATA	18. OVERLAY (8,0)	19. OVERLAY (8,0)	20. OVERLAY (8,0)
21. INPUT DATA	22. OVERLAY (8,0)	23. OVERLAY (8,0)	24. OVERLAY (8,0)
25. INPUT DATA	26. OVERLAY (8,0)	27. OVERLAY (8,0)	28. OVERLAY (8,0)
29. INPUT DATA	30. OVERLAY (8,0)	31. OVERLAY (8,0)	32. OVERLAY (8,0)
33. INPUT DATA	34. OVERLAY (8,0)	35. OVERLAY (8,0)	36. OVERLAY (8,0)
37. INPUT DATA	38. OVERLAY (8,0)	39. OVERLAY (8,0)	40. OVERLAY (8,0)
41. INPUT DATA	42. OVERLAY (8,0)	43. OVERLAY (8,0)	44. OVERLAY (8,0)
45. INPUT DATA	46. OVERLAY (8,0)	47. OVERLAY (8,0)	48. OVERLAY (8,0)
49. INPUT DATA	50. OVERLAY (8,0)	51. OVERLAY (8,0)	52. OVERLAY (8,0)
53. INPUT DATA	54. OVERLAY (8,0)	55. OVERLAY (8,0)	56. OVERLAY (8,0)
57. INPUT DATA	58. OVERLAY (8,0)	59. OVERLAY (8,0)	60. OVERLAY (8,0)
61. INPUT DATA	62. OVERLAY (8,0)	63. OVERLAY (8,0)	64. OVERLAY (8,0)
65. INPUT DATA	66. OVERLAY (8,0)	67. OVERLAY (8,0)	68. OVERLAY (8,0)
69. INPUT DATA	70. OVERLAY (8,0)	71. OVERLAY (8,0)	72. OVERLAY (8,0)
73. INPUT DATA	74. OVERLAY (8,0)	75. OVERLAY (8,0)	76. OVERLAY (8,0)
77. INPUT DATA	78. OVERLAY (8,0)	79. OVERLAY (8,0)	80. OVERLAY (8,0)
81. INPUT DATA	82. OVERLAY (8,0)	83. OVERLAY (8,0)	84. OVERLAY (8,0)
85. INPUT DATA	86. OVERLAY (8,0)	87. OVERLAY (8,0)	88. OVERLAY (8,0)
89. INPUT DATA	90. OVERLAY (8,0)	91. OVERLAY (8,0)	92. OVERLAY (8,0)
93. INPUT DATA	94. OVERLAY (8,0)	95. OVERLAY (8,0)	96. OVERLAY (8,0)
97. INPUT DATA	98. OVERLAY (8,0)	99. OVERLAY (8,0)	100. OVERLAY (8,0)

OVERLAY (8,0)

INPUT DATA PROCESSING AND GEOMETRY ANALYSIS

**PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS**

FORTRAN MODULE WING AND EMPENNAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000021)	2.04	10	(000010)	2.03	(000019)	2.03
(000029)	2.08	20	(000027)	2.07	(000027)	2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CCNTL

(000041)	5.01	CCNTL	(000021)	2.04-X
(000050)	5.02		(000051)	5.03
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(000057)	5.10	101		
(000059)	5.11	110		
(000101)	5.14	111		
(000103)	5.15	112	(000100)	5.13
(000104)	5.16	113	(000100)	5.13
(000112)	5.20	1130	(000102)	5.14
(000120)	5.22		(000122)	5.25
(000122)	5.25	1134		
(000125)	5.26		(000125)	5.31
(000126)	5.31	1135		
(000132)	5.35		(000134)	5.01
(000134)	5.01	1136		
(000140)	5.02	1139	(000111)	5.19
(000141)	5.03	114		
(000143)	5.05	115		
(000144)	5.06	116	(000142)	5.04
(000145)	5.07	117	(000144)	5.05
(000146)	5.08	118	(000146)	5.08
(000147)	5.09	119	(000148)	5.10
(000148)	5.10	120	(000148)	5.10
(000149)	5.11	121	(000148)	5.10
(000150)	5.12	122	(000150)	5.12
(000151)	5.13	123	(000152)	5.14
(000152)	5.14	124	(000152)	5.14
(000153)	5.15	125	(000154)	5.16
(000154)	5.16	126	(000156)	5.18
(000155)	5.17	127	(000158)	5.20
(000156)	5.18	128	(000160)	5.22
(000157)	5.19	129	(000162)	5.24
(000158)	5.20	130	(000164)	5.26
(000159)	5.21	131		
(000160)	5.22	132		
(000161)	5.23	133		
(000162)	5.24	134		
(000163)	5.25	135		
(000164)	5.26	136		
(000165)	5.27	137		
(000166)	5.28	138		
(000171)	5.29	139		
(000172)	5.30	1391		
(000174)	5.31	1392		
(000177)	5.32	1393		
(000180)	5.34	140		
(000183)	5.35	141		
(000184)	5.36			
(000185)	5.37	142		
(000188)	7.01			
(000184)	7.04	143		
(000185)	7.05	144		
(000187)	7.06	145		
(000205)	7.08	146		

CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAGE/BOX
(000205)	7.10		(000210)	7.14		
(000207)	7.11	147				
(000208)	7.12	1470	(000205)	7.10		
(000209)	7.13	1471				
(000210)	7.14	1472	(000208)	7.12		
(000212)	7.16	1473				
(000213)	7.17	1474	(000211)	7.15		
(000214)	7.18	1475				
(000215)	7.19	1476	(000213)	7.17		
(000220)	7.20	150	(000100)	6.20		
(000221)	7.21	155				
(000222)	7.22	156	(000220)	7.20		
(000223)	7.23	1501				
(000224)	7.24	1502				
(000227)	7.25	1503	(000223)	7.23		
(000231)	7.27		(000232)	7.28		
(000232)	7.28	151				
(000235)	7.30		(000244)	7.35		
(000241)	7.33	152				
(000243)	7.34	153	(000240)	7.32		
(000244)	7.35	154	(000240)	7.32		
(000253)	8.01	160	(000100)	6.20		
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(000257)	8.03	1611				
(000258)	8.04	1612	(000256)	8.02		
(000259)	8.05	1613				
(000260)	8.06	1614				
(000261)	8.07	1615	(000259)	8.05		
(000262)	8.08	1616				
(000265)	8.09	162	(000258)	8.04	(000351)	8.07
(000273)	8.13	163				
(000274)	8.14	164	(000270)	8.12		
(000275)	8.15	165				
(000276)	8.16	166	(000274)	8.14		
(000277)	8.17		(000276)	8.16		
(000278)	8.18	167				
(000279)	8.19	168	(000277)	8.17		
(000285)	8.21	170	(000240)	7.32	(000273)	8.13
(000287)	8.22		(000280)	8.23		
(000289)	8.23	171				
(000295)	8.25	180	(000294)	7.08	(000215)	7.10
(000301)	8.27	181				
(000305)	8.29	182	(000300)	8.26		
(000307)	8.29	183				
(000308)	8.30	184				
(000309)	8.31	185	(000307)	8.29		
(000310)	8.32		(000315)	8.37		
(000311)	8.33	186				
(000312)	8.34	187	(000310)	8.32		
(000313)	8.35	188				
(000314)	8.36	189				
(000315)	8.37	190	(000312)	8.34	(000313)	8.36
(000317)	8.39	191				
(000318)	8.40	192	(000316)	8.39		
(000319)	8.41	193				
(000320)	8.01	194	(000318)	8.40		
(000321)	8.02	195				
(000322)	8.03	196	(000320)	8.01		
(000323)	8.04	197				
(000325)	8.06	198	(000326)	8.08	(000322)	8.03
(000327)	8.06	199				
(000329)	8.08		(000330)	8.09		
(000330)	8.09	200				
(000333)	8.10	201	(000325)	8.06		
(000334)	8.11		(000335)	8.12		
(000336)	8.12	202				
(000338)	8.13	203	(000334)	8.11		
(000339)	8.15	204				
(000339)	8.16	205	(000337)	8.14		
(000340)	8.17	204				
(000343)	8.18	205	(000339)	8.16		
(000346)	8.19	206				

00/10/74
TABLE OF CONTENTS AND REFERENCES
CARD NO PAGE/BOX NAME

AUTOFLOW CHART SET - SHEEP
REFERENCES SOURCE SEQUENCE NO. AND PAGE/BOX

PAGE 3

(000347)	9.20	207	(000345)	9.10	
(000348)	9.21	208			
(000349)	9.22	209	(000347)	9.20	
(000350)	9.23	210			
(000351)	9.25	211	(000349)	9.22	
(000352)	9.26	2112			
(000353)	9.27	2114	(000350)	9.25	
(000354)	9.28		(000377)	9.37	
(000370)	9.32	212			
(000373)	9.33		(000376)	9.36	
(000375)	9.35	213			
(000376)	9.36	214	(000374)	9.34	
(000377)	9.37	215	(000371)	9.31	
(000384)	10.02		(000405)	10.12	
(000387)	10.04	216			
(000390)	10.05	217			
(000400)	10.07	218	(000388)	10.05	
(000401)	10.08	219			
(000402)	10.09	2190	(000400)	10.07	
(000404)	10.11	2191			
(000405)	10.12	220	(000395)	10.03	(000402) 10.10
(000406)	10.14		(000423)	10.23	
(000412)	10.16	221			
(000415)	10.18		(000419)	10.21	
(000418)	10.20	222			
(000419)	10.21	223	(000417)	10.19	
(000423)	10.23	224	(000411)	10.15	
(000427)	10.25	225			
(000429)	10.27	226			
(000430)	10.28	227	(000428)	10.26	
(000431)	10.29	228			
(000432)	10.30	229	(000430)	10.28	
(000434)	10.32	2290			
(000435)	10.33	230	(000425)	10.24	(000432) 10.31
(000438)	10.34	234			
(000439)	10.35	235			
(000440)	10.36	236	(000438)	10.34	
(000441)	10.37	237			
(000442)	10.38	238	(000440)	10.36	
(000443)	10.39	239	-		
(000445)	10.40	240	(000442)	10.38	
(000451)	11.01	240			
(000452)	11.02	241			
(000460)	11.07		(000462)	11.10	
(000461)	11.08	246			
(000462)	11.10	247			
(000463)	11.15		(000470)	11.10	
(000465)	11.16	248			
(000470)	11.18	249			
(000477)	11.21		(000470)	11.24	
(000478)	11.24	251			
(000487)	11.25	255	(000451)	11.01	
(000484)	11.26		(000480)	11.27	
(000488)	11.27	256			
(000493)	11.28	258			
(000495)	11.29	259			

CHART TITLE - NON PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CASE

(000507)	14.01	CASE	(000493)	11.28-X
(000509)	14.02		(000506)	14.03
(000516)	14.03	100		
(000560)	14.05		(000509)	14.00
(000562)	14.07	101		
(000564)	14.08	1020	(000501)	14.06
(000565)	14.09	102	(000503)	14.07
(000570)	14.12		(000570)	14.14

05/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 4
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO. AND PAGE/BOX	
(000571)	14.13	103				
(000572)	14.14	104	(000570)	14.12		
(000577)	14.17	105				
(000578)	14.18	106	(000578)	14.16		
(000584)	14.19	107	(000578)	14.16		
(000585)	14.21	108				
(000587)	14.22	109				
(000590)	14.23	110	(000585)	14.20	(000585) 14.21	
(000591)	14.24		(000584)	14.25		
(000594)	14.25	111				
(000601)	14.27	200				
(000613)	14.32	210				
(000614)	14.33	211	(000612)	14.31		
(000616)	14.35	212				
(000617)	14.36	213	(000615)	14.34		
(000620)	14.38	214				
(000621)	14.39	215	(000619)	14.37		
(000624)	15.02	216				
(000625)	15.03	217	(000623)	15.01		
(000628)	15.05	218				
(000629)	15.06	219	(000627)	15.04		
(000630)	15.07	220	(000628)	15.05		
(000634)	15.09		(000637)	15.12		
(000638)	15.11	221				
(000637)	15.12	222	(000635)	15.10		
(000641)	15.13	200				
CHART TITLE - NON-PROCEDURAL STATEMENTS						
CHART TITLE - INTRODUCTORY COMMENTS						
CHART TITLE - SUBROUTINE GEOM						
(000752)	10.01	GEOM	(000601)	14.27-X		
(000757)	10.02	2040				
(000760)	10.04	2041				
(000710)	10.05	2042				
(000711)	10.06	2043				
(000717)	10.07	205	(000708)	10.03	(000708) 10.04	(000710) 10.05
(000719)	10.09		(000721)	10.10		
(000721)	10.10	2050				
(000724)	10.11	100				
(000731)	10.13	101				
(000740)	10.15	102				
(000747)	10.16	1020				
(000748)	10.19	1021	(000745)	10.17		
(000750)	10.21	1022				
(000751)	10.22	1023	(000749)	10.20		
(000753)	10.24	1024				
(000754)	10.25	1025	(000752)	10.23		
(000776)	10.32	103				
(000777)	10.34	104				
(000779)	10.36	105				
(000780)	10.37	106	(000776)	10.33	(000776) 10.35	
(000782)	10.38	107				
(000784)	10.39	108	(000781)	10.01		
(000785)	10.44		(000787)	10.05		
(000787)	10.45	109				
(000790)	10.46		(000785)	10.11		
(000793)	10.11	1001				
(000795)	10.11		(000795)	10.09		
(000801)	10.14		(000811)	10.23		
(000802)	10.15	110				
(000803)	10.16	111	(000811)	10.14		
(000805)	10.16	112				
(000806)	10.16	113	(000804)	10.17		
(000808)	10.21	1130				
(000809)	10.22	1.31	(000807)	10.20		
(000811)	10.23	114				
(000815)	10.25		(000805)	10.32		
(000819)	10.28	1151				

05/10/74			TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 5
CARD ID	PAGE/BOX	NAME	REFERENCES	SEQUENCE NO.	AND PAGE/BOX		
(000020)	19.20	1152	(000010)	19.27			
(000023)	19.31	1153	(000010)	19.27	(000010)	19.20	
(000026)	19.32	115	(000022)	19.30			
(000028)	19.33	116					
(000033)	19.35	117					
(000035)	19.35	118	(000032)	19.34			
(000039)	19.38	119					
(000040)	19.39	120	(000038)	19.37			
(000041)	19.40	121					
(000043)	20.02	122					
(000044)	20.03	123	(000040)	19.39	(000042)	20.01	
(000044)	20.07	130					
(000057)	20.08	140					
(000064)	20.11	150					
(000069)	20.14		(000067)	20.24			
(000073)	20.16	151	(000070)	20.15			
(000075)	20.17	152	(000070)	20.15			
(000076)	20.18	153					
(000084)	20.22	154					
(000085)	20.23	155	(000083)	20.21			
(000087)	20.24	156	(000075)	20.17	(000085)	20.22	
(000099)	20.29	160					
(000900)	20.30		(000927)	21.14			
(000910)	21.03		(000913)	21.05			
(000913)	21.06	161					
(000915)	21.08	162					
(000924)	21.13	163	(000914)	21.07			
(000927)	21.14	164					
(000930)	21.15	160					
(000933)	21.17		(000936)	21.18			
(000936)	21.18	201					
(000945)	21.21	202					
(000956)	21.24	300	(000954)	21.23			
(000956)	21.25	300	(000954)	21.23			
(000991)	22.01	203					
(000996)	22.03	216					
(001000)	22.04		(001004)	22.05			
(001004)	22.05	217					
(001050)	22.21	218					
(001050)	22.24	219					
(001053)	22.25	220	(001050)	22.23			
(001064)	22.26		(001065)	22.27			
(001066)	22.27	221					
(001069)	22.28	214					
(001070)	23.01		(001070)	23.04			
(001070)	23.04	219					
(001081)	23.08	222					
(001082)	23.09	223	(001080)	23.07			
(001095)	23.10	224	(001081)	23.08			
(001100)	23.12		(001102)	23.13			
(001102)	23.13	225					
(001103)	23.14	226	(001094)	23.09			
(001105)	23.19	227					
(001130)	24.01	400					
(001100)	24.12	401					
(001109)	24.13	402	(001107)	24.11			
(001175)	24.15		(001171)	24.17			
(001181)	24.17	403					
(001187)	24.19	410	(001184)	24.18			
(001189)	24.21	411					
(001190)	24.22	412	(001180)	24.20			
(001191)	24.23	413					
(001192)	24.24	414	(001190)	24.22			
(001193)	24.25	415					
(001195)	24.26	416	(001192)	24.24			
(001196)	24.27	417					
(001198)	24.28	418	(001195)	24.26			
(001201)	24.28		(001204)	25.01			
(001204)	25.01	419					
(001207)	25.03	420					
(001233)	25.05	430	(001184)	24.18	(001205)	25.02	
(001238)	25.07	431					

CARD ID PAGE/BOX NAME

REFERENCES SOURCE SEQUENCE NO. AND PAGE/BOX

(001245)	25.09		(001247)	25.12
(001247)	25.12	4302		
(001251)	25.15		(001253)	25.18
(001253)	25.18	4303		
(001256)	25.19	430	(001237)	25.06

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SCENE

(001257)	26.01	SCENE	(000004)	26.07-1
(001260)	26.01	100		
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(001265)	26.04	101		
(001268)	26.06		(001269)	26.07
(001269)	26.07	102		
(001267)	26.10	103	(001265)	26.06
(001268)	26.11	104	(001265)	26.06
(001269)	26.12	105	(001265)	26.06
(001312)	26.13	110		
(001313)	26.14		(001323)	26.23
(001314)	26.15	111		
(001316)	26.17	112		
(001317)	26.18	113	(001316)	26.16
(001320)	26.20	116		
(001321)	26.21	117	(001319)	26.19
(001322)	26.22	118	(001319)	26.19
(001323)	26.23	119		
(001326)	26.24	120	(001313)	26.14
(001327)	26.25		(001333)	26.26
(001331)	26.27	121		
(001333)	26.28	122	(001336)	26.28
(001336)	26.29	130		
(001338)	26.31	131		
(001339)	26.32	132	(001337)	26.30
(001340)	26.33	133	(001337)	26.30
(001342)	26.34	134		
(001343)	26.35		(001334)	26.32
(001344)	26.36	135		
(001346)	26.38	136		
(001347)	26.39	137	(001346)	26.37
(001351)	26.42	138		
(001352)	26.43	139	(001360)	26.41
(001353)	26.01	1301	(001350)	26.41
(001354)	26.02	130		
(001357)	26.03	140	(001343)	26.35
(001360)	26.04		(001364)	26.07
(001362)	26.06	141		
(001364)	26.07	142	(001361)	26.05
(001368)	26.09		(001368)	26.10
(001369)	26.10	1500		
(001370)	26.11	150		
(001377)	26.13		(001360)	26.14
(001380)	26.14	151		
(001383)	26.16	152		
(001387)	26.18		(001404)	26.28
(001388)	26.19	153		
(001390)	26.21	154		
(001391)	26.22	155	(001390)	26.20
(001397)	26.25	156		
(001403)	26.27	157	(001396)	26.24
(001404)	26.28	158	(001401)	26.26
(001407)	26.29	160	(001397)	26.18
(001408)	26.30		(001412)	26.33
(001410)	26.32	161		
(001412)	26.33	162	(001409)	26.31
(001416)	26.34	200	(001392)	26.15
(001417)	26.35	2000		
(001421)	26.01		(001423)	26.04

(001423)	30.04	203			
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(001430)	30.10	205			
(001440)	30.12	210	(001410)	20.34	
(001443)	31.01	211	(001440)	30.12	
(001444)	31.02		(001445)	31.03	
(001445)	31.03	212			
(001447)	31.05		(001440)	31.06	
(001440)	31.06	213			
(001450)	31.07	214			
(001450)	31.09		(001450)	31.10	
(001450)	31.10	2140			
(001460)	31.12	2141	(001455)	32.17	
(001465)	31.13	215	(001462)	31.12	
(001466)	31.14	2150			
(001505)	31.15	250	(001405)	31.13	
(001500)	31.17		(001511)	31.10	
(001511)	31.10	251			
(001514)	31.19	260	(001502)	32.21	
(001515)	31.20		(001516)	31.21	
(001516)	31.21	261			
(001400)	32.01	216	(001462)	31.12	
(001471)	32.03	217			
(001472)	32.04	218	(001467)	31.14	(001470) 32.02
(001470)	32.07	219			
(001480)	32.08	221	(001470)	32.07	
(001481)	32.09	222	(001477)	32.06	(001470) 32.07
(001483)	32.11	223			
(001484)	32.12	224	(001487)	32.10	
(001487)	32.13	225			
(001480)	32.14		(001481)	32.15	
(001491)	32.15	226			
(001490)	32.18	240	(001495)	32.17	
(001500)	32.20		(001501)	32.21	
(001501)	32.21	241			
(001521)	32.22	270	(001510)	31.22	
(001525)	32.25		(001520)	32.20	
(001520)	32.28	273			
(001530)	32.29	299	(001440)	30.12	(001519) 31.02

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE VSGOCH

(001541)	35.01	VSGOCH	(000950)	21.22-1	
(001505)	35.01	100			
(001506)	35.02		(001500)	35.03	
(001500)	35.03	101			
(001573)	35.05	110			
(001570)	35.06	120	(001573)	35.05	
(001570)	35.08	121			
(001570)	35.09	122	(001577)	35.07	
(001504)	35.12	123	(001000)	35.14	
(001507)	35.13	124	(001503)	35.11	
(001509)	35.15	125			
(001500)	35.16	126	(001500)	35.14	
(001501)	35.17	127	(001503)	35.11	(001505) 35.12
(001506)	35.19	128			
(001600)	35.21	129	(001575)	35.10	
(001603)	35.23		(001604)	35.24	
(001604)	35.24	130			
(001612)	35.26		(001613)	35.29	
(001613)	35.29	131			
(001610)	35.31		(001620)	35.33	
(001620)	35.33	132			
(001624)	35.01		(001625)	35.02	
(001625)	35.02	133			
(001631)	35.05		(001637)	35.08	
(001637)	35.08	134			

(001005)	36.29	(001099)	36.31
(001099)	36.31 135		
(001711)	36.36 136		
(001714)	36.37 137	(001710)	36.35
(001715)	36.38	(001709)	37.07
(001721)	37.04 138		
(001725)	37.06 139	(001722)	37.03
(001728)	37.07 140		
(001753)	37.17 141		
(001757)	37.19 143	(001752)	37.16
(001758)	37.20	(001755)	37.24
(001759)	37.21 144		
(001762)	37.23 145	(001758)	37.24
(001765)	37.24 146		
(001766)	37.25 148		
(001799)	38.01	(001803)	38.05
(001800)	38.02 151		
(001801)	38.03 152	(001799)	38.01
(001803)	38.05 153		
(001836)	38.16	(001842)	38.18
(001842)	38.18 154		
(001851)	38.22 155		
(001852)	38.23 156	(001850)	38.21
(001857)	38.25 157		
(001858)	38.26 158		
(001860)	38.27 159	(001857)	38.25
(001866)	38.29 160	(001856)	38.24
(001874)	38.32 5000		
(001880)	38.34	(001882)	38.37
(001882)	38.37 510		
(001885)	38.38 299	(001870)	35.04
		(001873)	35.05
		(001872)	38.31

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE TENDC

(001897)	41.01 TENDC	(000897)	20.20-X
(001824)	41.01 500		
(001825)	41.03 501		
(001826)	41.03	(001826)	41.04
(001830)	41.05	(001831)	41.07
(001831)	41.07 502		
(001845)	41.10 503		
(001852)	41.12 5030		
(001854)	41.14 5031		
(001857)	41.15 504	(001851)	41.11
(001858)	41.16 5040	(001853)	41.13
(001859)	41.17	(001860)	41.18
(001860)	41.18 5041		
(001864)	41.20 505	(001861)	41.19
(001865)	41.22 5051		
(001868)	41.24 5052		
(001871)	41.25 506	(001861)	41.19
(001872)	41.26 507	(001865)	41.21
(001874)	41.28	(001867)	41.23
(001875)	41.29 5080	(001861)	41.19
(001877)	42.01 508	(001870)	42.02
(001878)	42.02 509	(001874)	41.20
(001881)	42.03 510	(001876)	41.20
(001882)	42.04	(002071)	43.13
(002015)	42.14 5100		
(002020)	42.16	(002035)	42.24
(002032)	42.23 5101		
(002035)	42.24 5102	(002031)	42.22
(002038)	42.25 5103	(002014)	42.13
(002039)	42.26	(002040)	42.27
(002040)	42.27 5104		
(002045)	43.01 511		
(002046)	43.02 5110		

05/18/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP			PAGE 9
CARD ID	PAGE/BOX	NAME	REFERENCES	(SOURCE	SEQUENCE NO. AND PAGE/BOX)	
(002094)	43.05	9111				
(002095)	43.06	9112				
(002092)	43.08	910	(002045)	43.01	(002053) 43.04 (002094) 43.05	
(002071)	43.13	919				
(002077)	43.15	920				
(002078)	43.16	921				
(002084)	43.18	922	(002081)	43.17		
(002086)	44.01	923	(002081)	43.17		
(002087)	44.02	924	(002085)	43.18		
(002095)	44.04	925				
(002097)	44.05	926	(002094)	44.03		
(002100)	44.07	927				
(002101)	44.08	928	(002098)	44.06		
(002102)	44.09	929	(002094)	44.03	(002095) 44.04	
(002103)	44.10	930	(002081)	43.17		
(002107)	44.11	940	(002077)	43.15		
(002112)	44.13	9001	(002110)	44.12		
(002116)	44.15	9003				
(002120)	44.16	9005	(002110)	44.12	(002115) 44.14	
(002132)	44.21		(002134)	44.22		
(002174)	44.22	941				
(002135)	44.23	99				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE ABOVE

(002190)	47.01	ABOVE	(001033)	22.15-X	(001046)	22.19-X	(001089)	42.06-X
(002172)	47.01	100						
(002177)	47.04	110						
(002184)	47.07	120	(002176)	47.03				
(002189)	47.09	302						
(002200)	47.12	390	(002197)	47.11				
(002200)	48.01	398	(002206)	47.15				
(002214)	48.02	303	(002197)	47.11	(002208)	47.15		
(002229)	48.06	304						
(002231)	48.08		(002240)	48.16				
(002247)	48.15	305						
(002248)	48.16	309	(002246)	48.14				
(002251)	48.17	310						
(002267)	48.22	319	(002265)	48.21				
(002271)	48.24	99	(002265)	48.21				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE DMAX

(002282)	51.01	DMAX	(002311)	51.04-X	(002120)	44.16-X	(002125)	44.18-X	(002210)	48.03-X	(002238)	48.10-X
			(002296)	48.10-X								
(002303)	51.01	99										
(002312)	51.04	101	(002314)	51.06								
(002313)	51.05	102										
(002315)	51.07	103	(002310)	51.04								
(002322)	51.09	104	(002310)	51.08								
(002324)	51.11		(002326)	51.12								
(002326)	51.12	105										
(002329)	51.15	106										
(002332)	51.18	110	(002329)	51.14	(002392)	52.25	(002416)	53.08				
(002330)	51.18	9001	(002330)	51.17								
(002340)	51.19	9002	(002330)	51.18								
(002344)	51.20	97	(002330)	51.18								
(002351)	52.01	200	(002319)	51.08								
(002353)	52.03	201										
(002354)	52.04	202	(002356)	52.06								
(002356)	52.05	203										
(002357)	52.07	204										
(002358)	52.08	205	(002354)	52.04								

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP	
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO. AND PAGE/BOX
(002362)	52.09	206	(002353)	52.03	
(002363)	52.10	207	(002352)	52.02	(002354) 52.04
(002368)	52.11	210	(002361)	52.08	
(002371)	52.13	211	(002374)	52.16	
(002372)	52.14	212			
(002373)	52.15	213			
(002375)	52.17	214			
(002377)	52.18	220	(002371)	52.13	(002372) 52.14
(002381)	52.19	221	(002378)	52.12	(002371) 52.13
(002387)	52.20	230	(002380)	52.18	
(002390)	52.21	231	(002385)	52.23	
(002394)	52.23	232			
(002398)	52.24	240	(002393)	52.22	
(002400)	52.25	241			
(002404)	52.28	120			
(002405)	52.29	122			
(002411)	53.01	124	(002404)	52.28	(002405) 52.29
(002413)	53.02	5008	(002411)	53.01	
(002418)	53.06	140	(002403)	52.27	(002404) 52.28 (002405) 52.29
(002420)	53.07	99	(002336)	51.17	(002347) 51.21 (002411) 53.01

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CAERO

(002436)	56.01	CAERO	(000902)	29.31-X	(001394)	29.23-X	(002388)	51.02-X
(002446)	56.01	100						
(002447)	56.02		(002448)	56.03				
(002448)	56.03	101						
(002453)	56.05	110						
(002454)	56.06	111	(002456)	56.08				
(002455)	56.07	112						
(002457)	56.09	113	(002454)	56.06				
(002460)	56.10	120						
(002461)	56.11	121	(002463)	56.13				
(002462)	56.12	122						
(002464)	56.14	123	(002461)	56.11				
(002466)	56.15	130						
(002470)	56.16	99						

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE SHXP(Y,X,YP,XP)

(002481)	59.01	SHXP	(001618)	35.31-X	(001619)	35.32-X	(001624)	35.01-X	(001802)	38.04-X
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PRTO

(002548)	62.01	PRTO	(000936)	21.24-X				
(002554)	62.01	198						
(002555)	62.02		(002556)	62.03				
(002556)	62.03	199						
(002562)	62.20	250						
(002563)	62.21		(002564)	62.27				
(002565)	62.25	251						
(002566)	62.27	259	(002574)	62.34				
(002571)	63.01		(002575)	63.04				
(002575)	63.04	263						
(002583)	63.08		(002587)	63.11				
(002587)	63.11	266						
(002589)	63.17		(002703)	63.20				
(002703)	63.20	299						

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 11
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO. AND PAGE/BOX	
(002707)	03.21	300			
(002708)	03.22	301			
(002709)	03.23	302			
(002705)	04.12		(002720)	04.14	
(002706)	04.14	304			
(002731)	04.15	000	(002707)	03.21	(002708) 03.22
(002733)	04.16	000	(002731)	04.15	
(002737)	04.17	002			
(002738)	04.18		(002741)	04.21	
(002741)	04.21	004			
(002743)	04.22	000	(002731)	04.15	

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE OCOP

(002794)	07.01	OCOP	(002563)	02.06-X
(002777)	07.01	1000		
(002778)	07.02		(002786)	07.04
(002786)	07.04	1001		
(002788)	07.06		(002791)	07.07
(002791)	07.07	100		
(002793)	07.09		(002811)	07.15
(002805)	07.13	101		
(002811)	07.15	100	(002804)	07.12
(002830)	07.22		(002831)	07.23
(002831)	07.23	110		
(002947)	07.29	200		
(002948)	07.29		(002888)	08.10
(002970)	08.02	201		
(002888)	08.10	200	(002889)	08.01
(002992)	08.13		(002895)	08.14
(002895)	08.14	210		
(002908)	08.19	220		
(002920)	08.22		(002920)	08.27
(002926)	08.25	221		
(002927)	08.26	222	(002925)	08.24
(002928)	08.27	223		
(002932)	08.29		(002933)	08.30
(002933)	08.30	230		
(002937)	08.32		(002938)	08.33
(002938)	08.33	231		
(002945)	08.36	232		
(002946)	08.37		(002947)	08.38
(002947)	08.38	233		
(002950)	08.39	200	(002944)	08.35

CHART TITLE - NON-PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOX	
1000171	2.02	UNRECOGNIZED SYNTAX
1000175	2.06	UNRECOGNIZED SYNTAX
1001041	9.16	UNDEFINED - 'READMS' EXTERNAL REFERENCE
1001051	9.17	UNDEFINED - 'READMS' EXTERNAL REFERENCE
1001061	9.18	UNDEFINED - 'READMS' EXTERNAL REFERENCE
1001081	14.20	UNDEFINED - 'WRITHS' EXTERNAL REFERENCE
1007041	10.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
1001233	25.05	UNDEFINED - 'WRITHS' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

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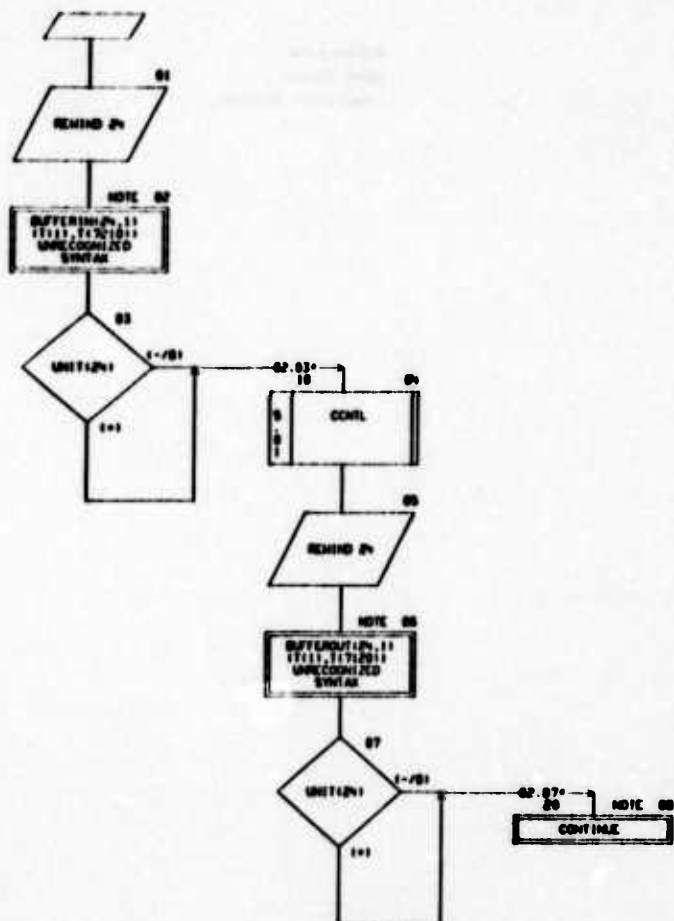
CHART TITLE - INTRODUCTORY COMMENTS

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PROGRAM FOR FIRST OVERLAY OF WIND/EMPERORAGE MODULE

INPUT DATA PROCESSING AND GEOMETRY CALCULATIONS.

CHART TITLE - PROCEDURES



08/10/74

AUTOFLW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON-PROCEDURAL STATEMENTS

PROGRAM CLATS
CONVEN 1171201
CONVEN /MISC/ 1015C11001

05/10/74

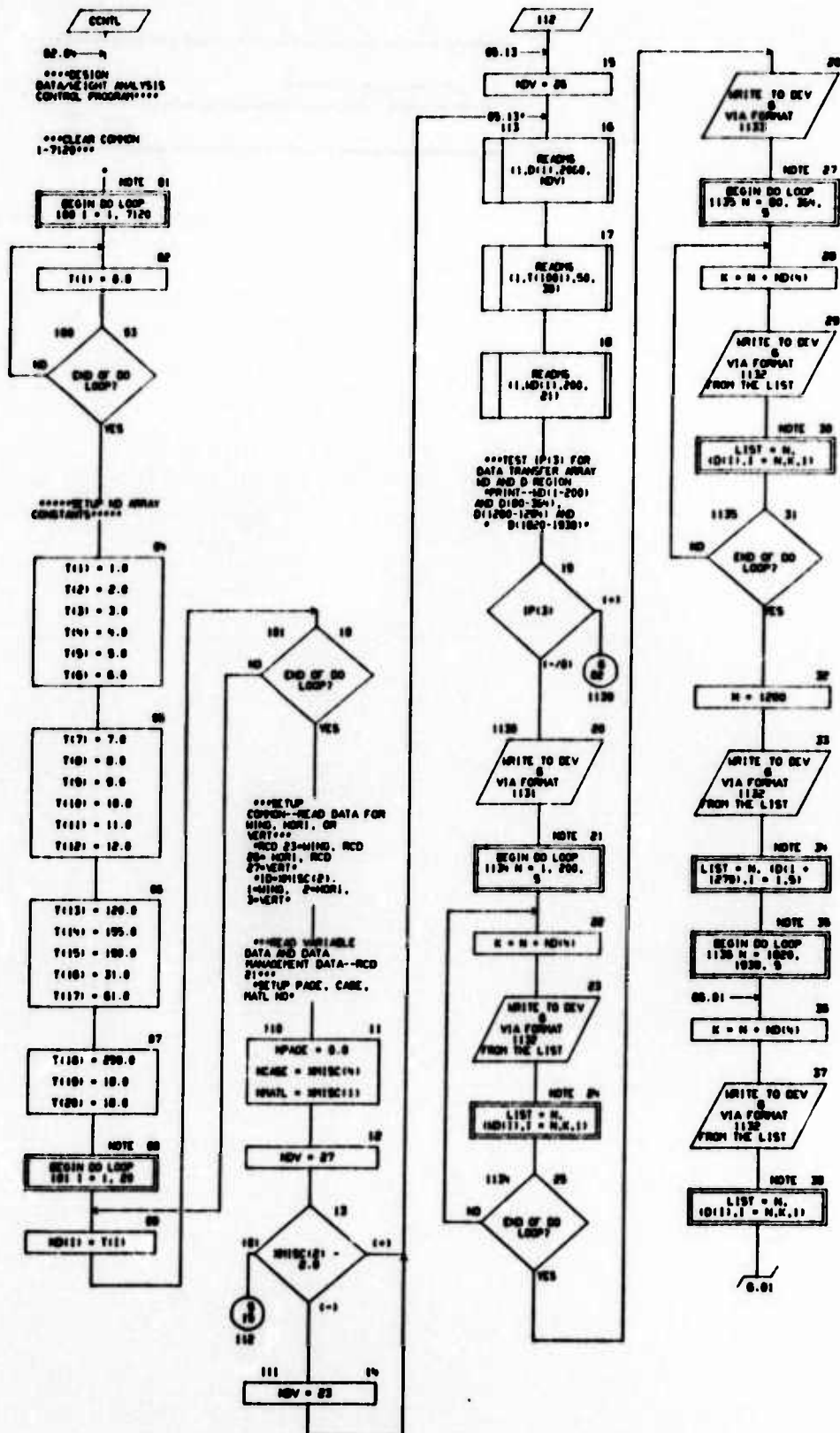
AUTOFLIGHT CHART SET - SHEEP HING AND EXPERIMENTAL MODULE - PAGE 04

CHART TITLE - INTRODUCTION CONTENTS

*****SUBROUTINE CONT*****

INITIALIZATION - DATA TRANSFER FROM GENERAL DATA

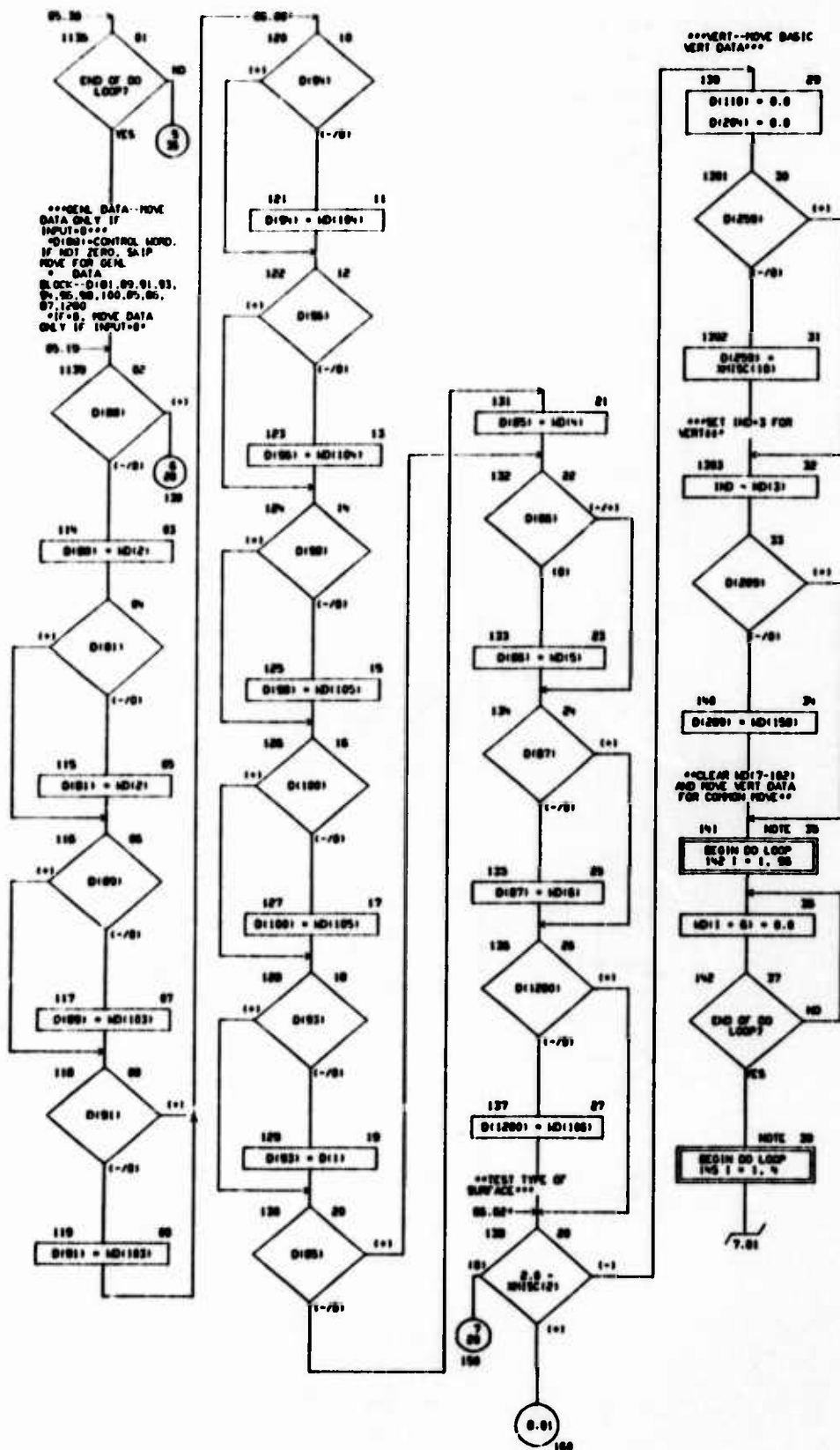
CHART TITLE - SUBROUTINE CCHNL



```

05.30      1130      01
      /  \
     /    \
    /      \
   /          \
  /            \
 /              \
/                \
END OF DO      NO
LOOP?          /
               /
              /
             /
            /
           /
          /
         /
        /
       /
      /
     /
    /
   /
  /
 /
/
YES
|
***GENR DATA--MOVE
DATA ONLY IF
INPUT=0***
***0101--CONTROL WORD.
IF NOT ZERO, SAIP
MOVE FOR GENR
DATA
BLOCK--0101.09.01.93,
04.95.00.100.05.06,
07.1200
IF 0, MOVE DATA
ONLY IF INPUT=0

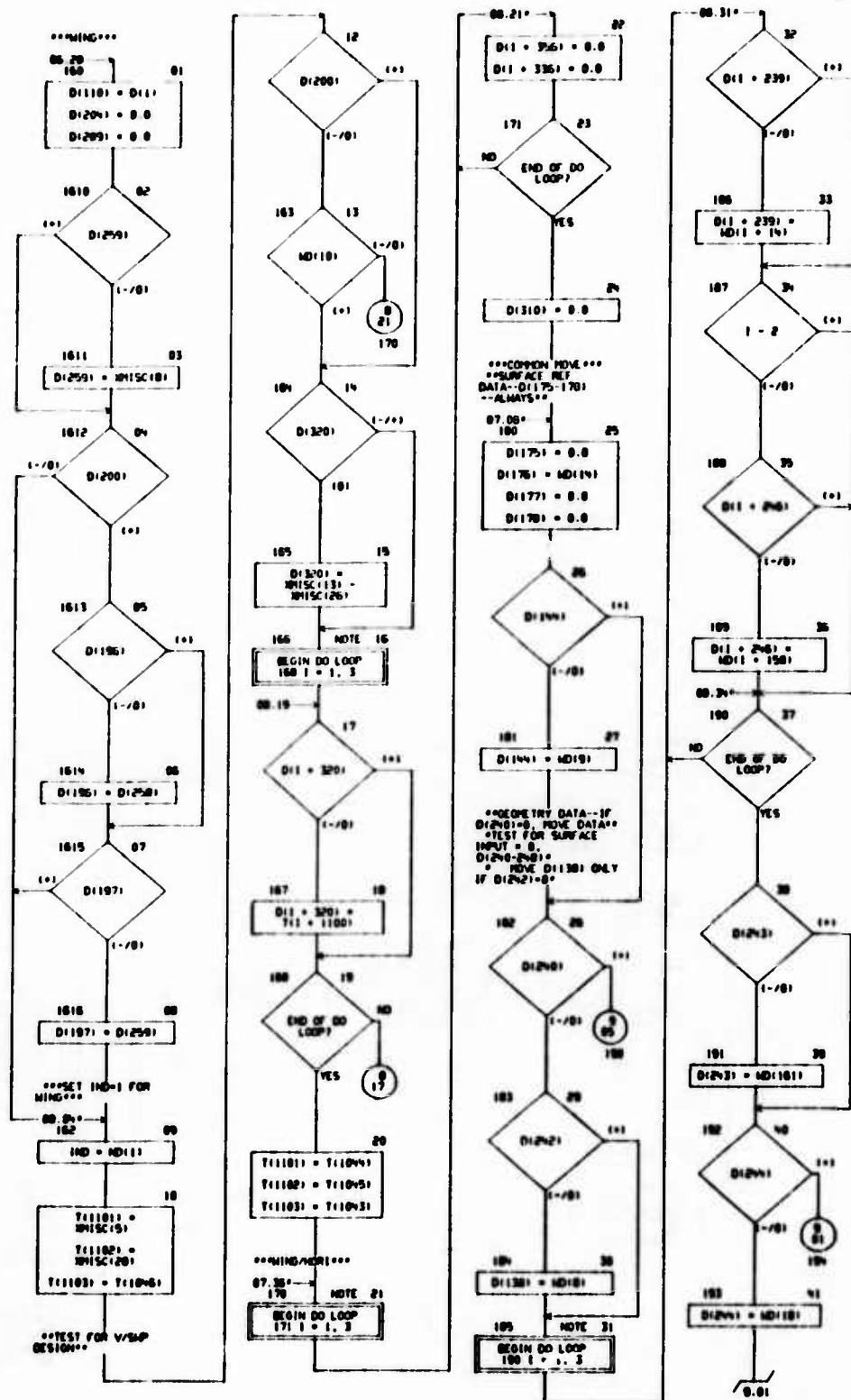
```




```

graph TD
    Start(( )) --> Init1[MD1 = 231 =  
MD1 = 1441  
MD1 = 271 =  
MD1 = 1401  
MD1 = 311 =  
MD1 = 1521  
MD1 = 1501 =  
MD1 = 1551]
    Init1 --> Init2[MD1 = 131 =  
MD1 = 1301]
    Init2 --> Loop1{1 = 3}
    Loop1 -- YES --> Calc1[MD1 = 201 =  
MD1 = 1421  
MD1 = 171 =  
MD1 = 1401]
    Loop1 -- NO --> Calc2[MD1 = 01 =  
MD1 = 1331]
    Calc1 --> EndLoop1{END OF DO LOOP?}
    EndLoop1 -- YES --> Calc3[MD141 = MD1371  
T11001 = MD1SC171  
T11001 = MD1SC1301  
T11001 = T11001]
    EndLoop1 -- NO --> Calc4{MD1301 = 1-701}
    Calc4 -- YES --> Calc5[MD1 = 01 = 0.0]
    Calc4 -- NO --> EndLoop2{END OF DO LOOP?}
    EndLoop2 -- YES --> Calc6[MD1 = 01 = 0.0]
    EndLoop2 -- NO --> Calc7[MD1 = 01 = 0.0]
    Calc5 --> EndLoop3{END OF DO LOOP?}
    EndLoop3 -- YES --> Calc8[MD1 = 01 = 0.0]
    EndLoop3 -- NO --> Calc9[MD1 = 01 = 0.0]
    Calc6 --> EndLoop4{END OF DO LOOP?}
    EndLoop4 -- YES --> Calc10[MD1 = 01 = 0.0]
    EndLoop4 -- NO --> Calc11[MD1 = 01 = 0.0]
    Calc7 --> EndLoop5{END OF DO LOOP?}
    EndLoop5 -- YES --> Calc12[MD1 = 01 = 0.0]
    EndLoop5 -- NO --> Calc13[MD1 = 01 = 0.0]
    Calc8 --> EndLoop6{END OF DO LOOP?}
    EndLoop6 -- YES --> Calc14[MD1 = 01 = 0.0]
    EndLoop6 -- NO --> Calc15[MD1 = 01 = 0.0]
    Calc9 --> EndLoop7{END OF DO LOOP?}
    EndLoop7 -- YES --> Calc16[MD1 = 01 = 0.0]
    EndLoop7 -- NO --> Calc17[MD1 = 01 = 0.0]
    Calc10 --> EndLoop8{END OF DO LOOP?}
    EndLoop8 -- YES --> Calc18[MD1 = 01 = 0.0]
    EndLoop8 -- NO --> Calc19[MD1 = 01 = 0.0]
    Calc11 --> EndLoop9{END OF DO LOOP?}
    EndLoop9 -- YES --> Calc20[MD1 = 01 = 0.0]
    EndLoop9 -- NO --> Calc21[MD1 = 01 = 0.0]
    Calc12 --> EndLoop10{END OF DO LOOP?}
    EndLoop10 -- YES --> Calc22[MD1 = 01 = 0.0]
    EndLoop10 -- NO --> Calc23[MD1 = 01 = 0.0]
    Calc13 --> EndLoop11{END OF DO LOOP?}
    EndLoop11 -- YES --> Calc24[MD1 = 01 = 0.0]
    EndLoop11 -- NO --> Calc25[MD1 = 01 = 0.0]
    Calc14 --> EndLoop12{END OF DO LOOP?}
    EndLoop12 -- YES --> Calc26[MD1 = 01 = 0.0]
    EndLoop12 -- NO --> Calc27[MD1 = 01 = 0.0]
    Calc15 --> EndLoop13{END OF DO LOOP?}
    EndLoop13 -- YES --> Calc28[MD1 = 01 = 0.0]
    EndLoop13 -- NO --> Calc29[MD1 = 01 = 0.0]
    Calc16 --> EndLoop14{END OF DO LOOP?}
    EndLoop14 -- YES --> Calc30[MD1 = 01 = 0.0]
    EndLoop14 -- NO --> Calc31[MD1 = 01 = 0.0]
    Calc17 --> EndLoop15{END OF DO LOOP?}
    EndLoop15 -- YES --> Calc32[MD1 = 01 = 0.0]
    EndLoop15 -- NO --> Calc33[MD1 = 01 = 0.0]
    Calc18 --> EndLoop16{END OF DO LOOP?}
    EndLoop16 -- YES --> Calc34[MD1 = 01 = 0.0]
    EndLoop16 -- NO --> Calc35[MD1 = 01 = 0.0]
    Calc19 --> EndLoop17{END OF DO LOOP?}
    EndLoop17 -- YES --> Calc36[MD1 = 01 = 0.0]
    EndLoop17 -- NO --> Calc37[MD1 = 01 = 0.0]
    Calc20 --> EndLoop18{END OF DO LOOP?}
    EndLoop18 -- YES --> Calc38[MD1 = 01 = 0.0]
    EndLoop18 -- NO --> Calc39[MD1 = 01 = 0.0]
    Calc21 --> EndLoop19{END OF DO LOOP?}
    EndLoop19 -- YES --> Calc40[MD1 = 01 = 0.0]
    EndLoop19 -- NO --> Calc41[MD1 = 01 = 0.0]
    Calc22 --> EndLoop20{END OF DO LOOP?}
    EndLoop20 -- YES --> Calc42[MD1 = 01 = 0.0]
    EndLoop20 -- NO --> Calc43[MD1 = 01 = 0.0]
    Calc23 --> EndLoop21{END OF DO LOOP?}
    EndLoop21 -- YES --> Calc44[MD1 = 01 = 0.0]
    EndLoop21 -- NO --> Calc45[MD1 = 01 = 0.0]
    Calc24 --> EndLoop22{END OF DO LOOP?}
    EndLoop22 -- YES --> Calc46[MD1 = 01 = 0.0]
    EndLoop22 -- NO --> Calc47[MD1 = 01 = 0.0]
    Calc25 --> EndLoop23{END OF DO LOOP?}
    EndLoop23 -- YES --> Calc48[MD1 = 01 = 0.0]
    EndLoop23 -- NO --> Calc49[MD1 = 01 = 0.0]
    Calc26 --> EndLoop24{END OF DO LOOP?}
    EndLoop24 -- YES --> Calc50[MD1 = 01 = 0.0]
    EndLoop24 -- NO --> Calc51[MD1 = 01 = 0.0]
    Calc27 --> EndLoop25{END OF DO LOOP?}
    EndLoop25 -- YES --> Calc52[MD1 = 01 = 0.0]
    EndLoop25 -- NO --> Calc53[MD1 = 01 = 0.0]
    Calc28 --> EndLoop26{END OF DO LOOP?}
    EndLoop26 -- YES --> Calc54[MD1 = 01 = 0.0]
    EndLoop26 -- NO --> Calc55[MD1 = 01 = 0.0]
    Calc29 --> EndLoop27{END OF DO LOOP?}
    EndLoop27 -- YES --> Calc56[MD1 = 01 = 0.0]
    EndLoop27 -- NO --> Calc57[MD1 = 01 = 0.0]
    Calc30 --> EndLoop28{END OF DO LOOP?}
    EndLoop28 -- YES --> Calc58[MD1 = 01 = 0.0]
    EndLoop28 -- NO --> Calc59[MD1 = 01 = 0.0]
    Calc31 --> EndLoop29{END OF DO LOOP?}
    EndLoop29 -- YES --> Calc60[MD1 = 01 = 0.0]
    EndLoop29 -- NO --> Calc61[MD1 = 01 = 0.0]
    Calc32 --> EndLoop30{END OF DO LOOP?}
    EndLoop30 -- YES --> Calc62[MD1 = 01 = 0.0]
    EndLoop30 -- NO --> Calc63[MD1 = 01 = 0.0]
    Calc33 --> EndLoop31{END OF DO LOOP?}
    EndLoop31 -- YES --> Calc64[MD1 = 01 = 0.0]
    EndLoop31 -- NO --> Calc65[MD1 = 01 = 0.0]
    Calc34 --> EndLoop32{END OF DO LOOP?}
    EndLoop32 -- YES --> Calc66[MD1 = 01 = 0.0]
    EndLoop32 -- NO --> Calc67[MD1 = 01 = 0.0]
    Calc35 --> EndLoop33{END OF DO LOOP?}
    EndLoop33 -- YES --> Calc68[MD1 = 01 = 0.0]
    EndLoop33 -- NO --> Calc69[MD1 = 01 = 0.0]
    Calc36 --> EndLoop34{END OF DO LOOP?}
    EndLoop34 -- YES --> Calc70[MD1 = 01 = 0.0]
    EndLoop34 -- NO --> Calc71[MD1 = 01 = 0.0]
    Calc37 --> EndLoop35{END OF DO LOOP?}
    EndLoop35 -- YES --> Calc72[MD1 = 01 = 0.0]
    EndLoop35 -- NO --> Calc73[MD1 = 01 = 0.0]
    Calc38 --> EndLoop36{END OF DO LOOP?}
    EndLoop36 -- YES --> Calc74[MD1 = 01 = 0.0]
    EndLoop36 -- NO --> Calc75[MD1 = 01 = 0.0]
    Calc39 --> EndLoop37{END OF DO LOOP?}
    EndLoop37 -- YES --> Calc76[MD1 = 01 = 0.0]
    EndLoop37 -- NO --> Calc77[MD1 = 01 = 0.0]
    Calc40 --> EndLoop38{END OF DO LOOP?}
    EndLoop38 -- YES --> Calc78[MD1 = 01 = 0.0]
    EndLoop38 -- NO --> Calc79[MD1 = 01 = 0.0]
    Calc41 --> EndLoop39{END OF DO LOOP?}
    EndLoop39 -- YES --> Calc80[MD1 = 01 = 0.0]
    EndLoop39 -- NO --> Calc81[MD1 = 01 = 0.0]
    Calc42 --> EndLoop40{END OF DO LOOP?}
    EndLoop40 -- YES --> Calc82[MD1 = 01 = 0.0]
    EndLoop40 -- NO --> Calc83[MD1 = 01 = 0.0]
    Calc43 --> EndLoop41{END OF DO LOOP?}
    EndLoop41 -- YES --> Calc84[MD1 = 01 = 0.0]
    EndLoop41 -- NO --> Calc85[MD1 = 01 = 0.0]
    Calc44 --> EndLoop42{END OF DO LOOP?}
    EndLoop42 -- YES --> Calc86[MD1 = 01 = 0.0]
    EndLoop42 -- NO --> Calc87[MD1 = 01 = 0.0]
    Calc45 --> EndLoop43{END OF DO LOOP?}
    EndLoop43 -- YES --> Calc88[MD1 = 01 = 0.0]
    EndLoop43 -- NO --> Calc89[MD1 = 01 = 0.0]
    Calc46 --> EndLoop44{END OF DO LOOP?}
    EndLoop44 -- YES --> Calc90[MD1 = 01 = 0.0]
    EndLoop44 -- NO --> Calc91[MD1 = 01 = 0.0]
    Calc47 --> EndLoop45{END OF DO LOOP?}
    EndLoop45 -- YES --> Calc92[MD1 = 01 = 0.0]
    EndLoop45 -- NO --> Calc93[MD1 = 01 = 0.0]
    Calc48 --> EndLoop46{END OF DO LOOP?}
    EndLoop46 -- YES --> Calc94[MD1 = 01 = 0.0]
    EndLoop46 -- NO --> Calc95[MD1 = 01 = 0.0]
    Calc49 --> EndLoop47{END OF DO LOOP?}
    EndLoop47 -- YES --> Calc96[MD1 = 01 = 0.0]
    EndLoop47 -- NO --> Calc97[MD1 = 01 = 0.0]
    Calc50 --> EndLoop48{END OF DO LOOP?}
    EndLoop48 -- YES --> Calc98[MD1 = 01 = 0.0]
    EndLoop48 -- NO --> Calc99[MD1 = 01 = 0.0]
    Calc51 --> EndLoop49{END OF DO LOOP?}
    EndLoop49 -- YES --> Calc100[MD1 = 01 = 0.0]
    EndLoop49 -- NO --> Calc101[MD1 = 01 = 0.0]
    Calc52 -->
```

CHART TITLE - SUBROUTINE CONT.



```

graph TD
    subgraph Column1 [ ]
        direction TB
        C1_01245{01245}
        C1_01246[01246 = MD(102)]
        C1_01247[01247 = MD(10)]
        C1_01248{01248}
        C1_01249[01249 = MD(10)]
        C1_01250{01250}
        C1_01251[01251 = MD(1)]
        C1_01252{01252}
        C1_01253[01253 = MD(1)]
        C1_01254{01254}
        C1_01255[01255 = MD(1)]
        C1_01256{01256}
        C1_01257[01257 = MD(1)]
        C1_01258{01258}
        C1_01259[01259 = MD(1)]
        C1_01260{01260}
        C1_01261[01261 = MD(1)]
        C1_01262{01262}
        C1_01263[01263 = MD(1)]
        C1_01264{01264}
        C1_01265[01265 = MD(1)]
        C1_01266{01266}
        C1_01267[01267 = MD(1)]
        C1_01268{01268}
        C1_01269[01269 = MD(1)]
        C1_01270{01270}
        C1_01271[01271 = MD(1)]
        C1_01272{01272}
        C1_01273[01273 = MD(1)]
        C1_01274{01274}
        C1_01275[01275 = MD(1)]
        C1_01276{01276}
        C1_01277[01277 = MD(1)]
        C1_01278{01278}
        C1_01279[01279 = MD(1)]
        C1_01280{01280}
        C1_01281[01281 = MD(1)]
        C1_01282{01282}
        C1_01283[01283 = MD(1)]
        C1_01284{01284}
        C1_01285[01285 = MD(1)]
        C1_01286{01286}
        C1_01287[01287 = MD(1)]
        C1_01288{01288}
        C1_01289[01289 = MD(1)]
        C1_01290{01290}
        C1_01291[01291 = MD(1)]
        C1_01292{01292}
        C1_01293[01293 = MD(1)]
        C1_01294{01294}
        C1_01295[01295 = MD(1)]
        C1_01296{01296}
        C1_01297[01297 = MD(1)]
        C1_01298{01298}
        C1_01299[01299 = MD(1)]
        C1_01300{01300}
        C1_01301[01301 = MD(1)]
        C1_01302{01302}
        C1_01303[01303 = MD(1)]
        C1_01304{01304}
        C1_01305[01305 = MD(1)]
        C1_01306{01306}
        C1_01307[01307 = MD(1)]
        C1_01308{01308}
        C1_01309[01309 = MD(1)]
        C1_01310{01310}
        C1_01311[01311 = MD(1)]
        C1_01312{01312}
        C1_01313[01313 = MD(1)]
        C1_01314{01314}
        C1_01315[01315 = MD(1)]
        C1_01316{01316}
        C1_01317[01317 = MD(1)]
        C1_01318{01318}
        C1_01319[01319 = MD(1)]
        C1_01320{01320}
        C1_01321[01321 = MD(1)]
        C1_01322{01322}
        C1_01323[01323 = MD(1)]
        C1_01324{01324}
        C1_01325[01325 = MD(1)]
        C1_01326{01326}
        C1_01327[01327 = MD(1)]
        C1_01328{01328}
        C1_01329[01329 = MD(1)]
        C1_01330{01330}
        C1_01331[01331 = MD(1)]
        C1_01332{01332}
        C1_01333[01333 = MD(1)]
        C1_01334{01334}
        C1_01335[01335 = MD(1)]
        C1_01336{01336}
        C1_01337[01337 = MD(1)]
        C1_01338{01338}
        C1_01339[01339 = MD(1)]
        C1_01340{01340}
        C1_01341[01341 = MD(1)]
        C1_01342{01342}
        C1_01343[01343 = MD(1)]
        C1_01344{01344}
        C1_01345[01345 = MD(1)]
        C1_01346{01346}
        C1_01347[01347 = MD(1)]
        C1_01348{01348}
        C1_01349[01349 = MD(1)]
        C1_01350{01350}
        C1_01351[01351 = MD(1)]
        C1_01352{01352}
        C1_01353[01353 = MD(1)]
        C1_01354{01354}
        C1_01355[01355 = MD(1)]
        C1_01356{01356}
        C1_01357[01357 = MD(1)]
        C1_01358{01358}
        C1_01359[01359 = MD(1)]
        C1_01360{01360}
        C1_01361[01361 = MD(1)]
        C1_01362{01362}
        C1_01363[01363 = MD(1)]
        C1_01364{01364}
        C1_01365[01365 = MD(1)]
        C1_01366{01366}
        C1_01367[01367 = MD(1)]
        C1_01368{01368}
        C1_01369[01369 = MD(1)]
        C1_01370{01370}
        C1_01371[01371 = MD(1)]
        C1_01372{01372}
        C1_01373[01373 = MD(1)]
        C1_01374{01374}
        C1_01375[01375 = MD(1)]
        C1_01376{01376}
        C1_01377[01377 = MD(1)]
        C1_01378{01378}
        C1_01379[01379 = MD(1)]
        C1_01380{01380}
        C1_01381[01381 = MD(1)]
        C1_01382{01382}
        C1_01383[01383 = MD(1)]
        C1_01384{01384}
        C1_01385[01385 = MD(1)]
        C1_01386{01386}
        C1_01387[01387 = MD(1)]
        C1_01388{01388}
        C1_01389[01389 = MD(1)]
        C1_01390{01390}
        C1_01391[01391 = MD(1)]
        C1_01392{01392}
        C1_01393[01393 = MD(1)]
        C1_01394{01394}
        C1_01395[01395 = MD(1)]
        C1_01396{01396}
        C1_01397[01397 = MD(1)]
        C1_01398{01398}
        C1_01399[01399 = MD(1)]
        C1_01400{01400}
        C1_01401[01401 = MD(1)]
        C1_01402{01402}
        C1_01403[01403 = MD(1)]
        C1_01404{01404}
        C1_01405[01405 = MD(1)]
        C1_01406{01406}
        C1_01407[01407 = MD(1)]
        C1_01408{01408}
        C1_01409[01409 = MD(1)]
        C1_01410{01410}
        C1_01411[01411 = MD(1)]
        C1_01412{01412}
        C1_01413[01413 = MD(1)]
        C1_01414{01414}
        C1_01415[01415 = MD(1)]
        C1_01416{01416}
        C1_01417[01417 = MD(1)]
        C1_01418{01418}
        C1_01419[01419 = MD(1)]
        C1_01420{01420}
        C1_01421[01421 = MD(1)]
        C1_01422{01422}
        C1_01423[01423 = MD(1)]
        C1_01424{01424}
        C1_01425[01425 = MD(1)]
        C1_01426{01426}
        C1_01427[01427 = MD(1)]
        C1_01428{01428}
        C1_01429[01429 = MD(1)]
        C1_01430{01430}
        C1_01431[01431 = MD(1)]
        C1_01432{01432}
        C1_01433[01433 = MD(1)]
        C1_01434{01434}
        C1_01435[01435 = MD(1)]
        C1_01436{01436}
        C1_01437[01437 = MD(1)]
        C1_01438{01438}
        C1_01439[01439 = MD(1)]
        C1_01440{01440}
        C1_01441[01441 = MD(1)]
        C1_01442{01442}
        C1_01443[01443 = MD(1)]
        C1_01444{0
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CHART TITLE - SUBROUTINE CCNTL

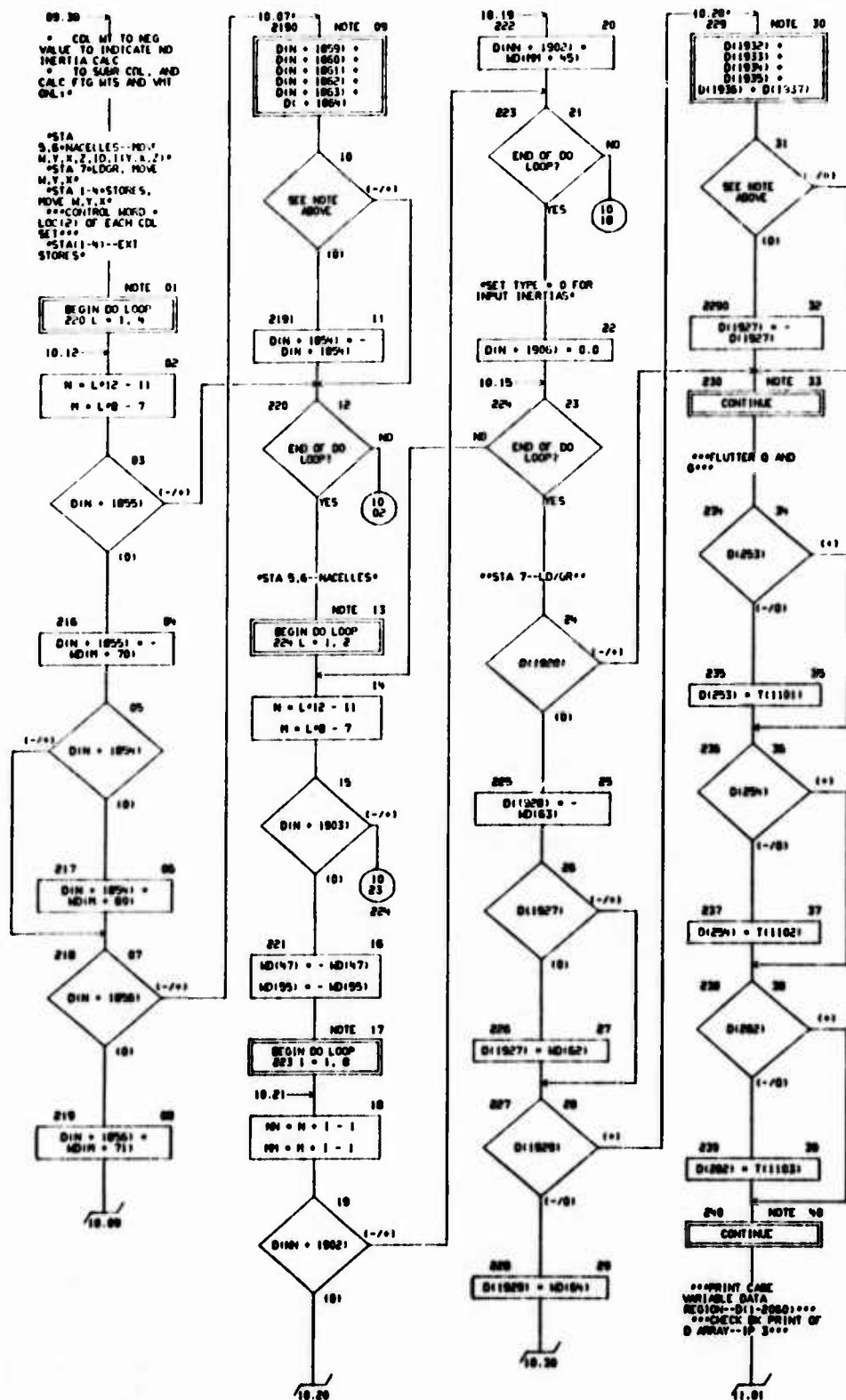


CHART TITLE - SUBROUTINE CCNTL

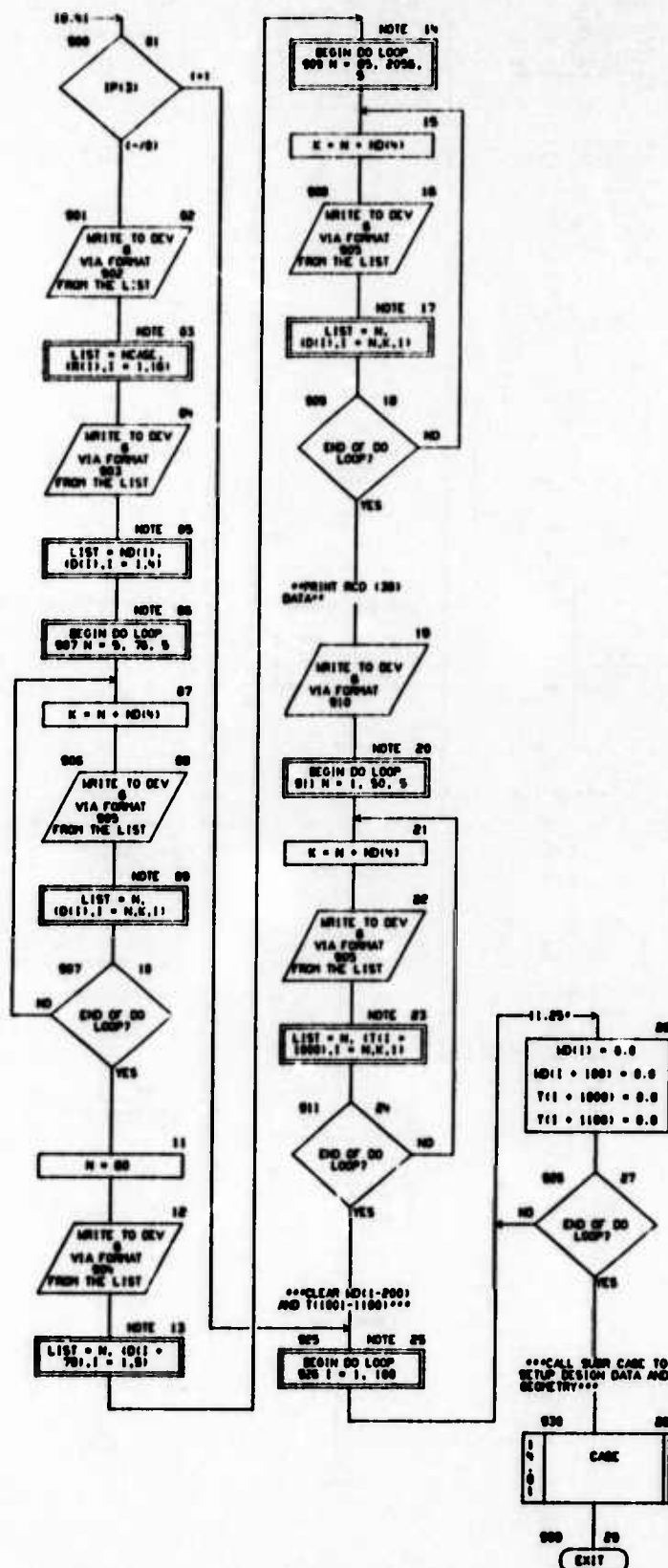


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(120)
COMMON /PRINT/ IP(80)
COMMON /MISC/ NMISC(100)
DIMENSION D(1,60),CD(200),ND(100),TM(800),
R(10),MD(200),
DC(100)
EQUIVALENCE (D(1),T(206)),(CD(1),T(412)),(ND(1),T(612)),
(TM(1),T(621)),(DC(1),D(140)),
(R(1),NMISC(85)),(ND(1),T(1)),
(MAREC,D(240)),(VTID,D(289)),
(INCAGE,ND(80)),(INPAGE,ND(85)),(INMATL,ND(59))
1131 FORMAT (1H,10X,47H--DATA MANAGEMENT TRANSFER DATA--MD ARRAY--*,
.33X,12H** CCNTL - IP(3) **/6H MD 1
1132 FORMAT (1H 14,5E10.0)
1133 FORMAT (1H0,10X,63H--INITIAL STATUS OF VARIABLE DATA--D ARRAY BE
FORE DATA TRANSFER--*,6X,19H** CCNTL - IP(3) **/6H D 1
902 FORMAT(7H) CASE,13,81X,19H** CCNTL - IP(3) **/10X,8A10/10X,8A10/)
903 FORMAT (1H014,4E10.0)
904 FORMAT (1H014,5E10.0)
905 FORMAT (1H 14,5E10.0)
910 FORMAT (1H0,7720H ***SPAL ARRAY. RCD 30***,60X,20H ** CCNTL - I
P(3) **/6H SPAL)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE CASE*****

GENERAL DATA INITIALIZATION AND CONTROL

CHART TITLE - SUBROUTINE CASE

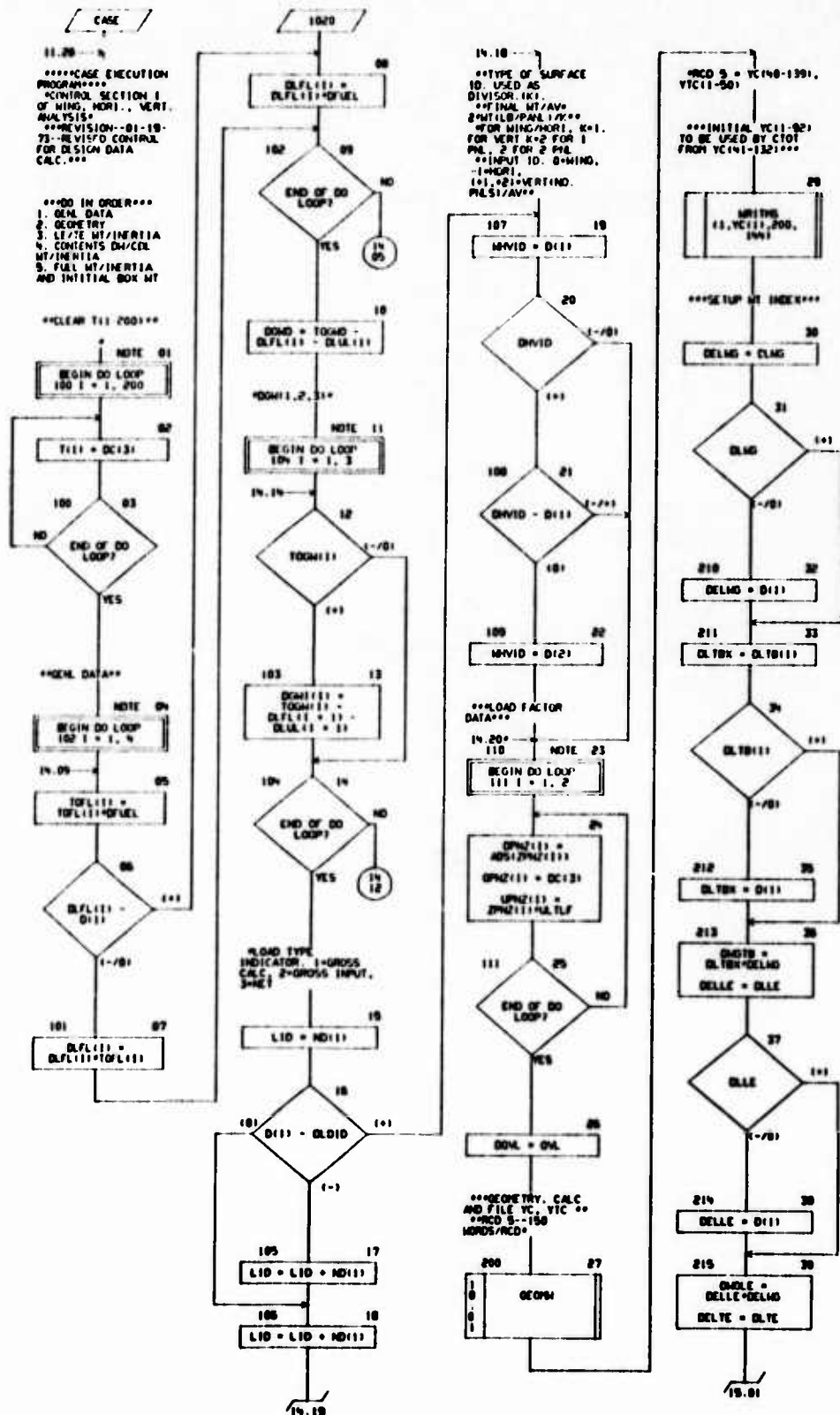


CHART TITLE - SUBROUTINE CASE

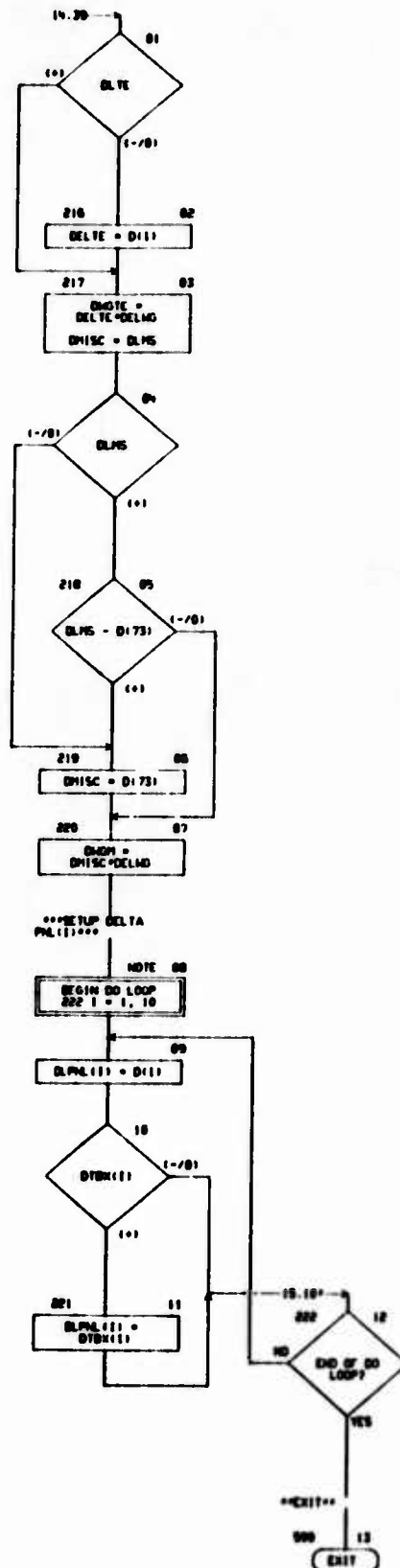


CHART TITLE - NON PROCEEDURAL STATEMENTS

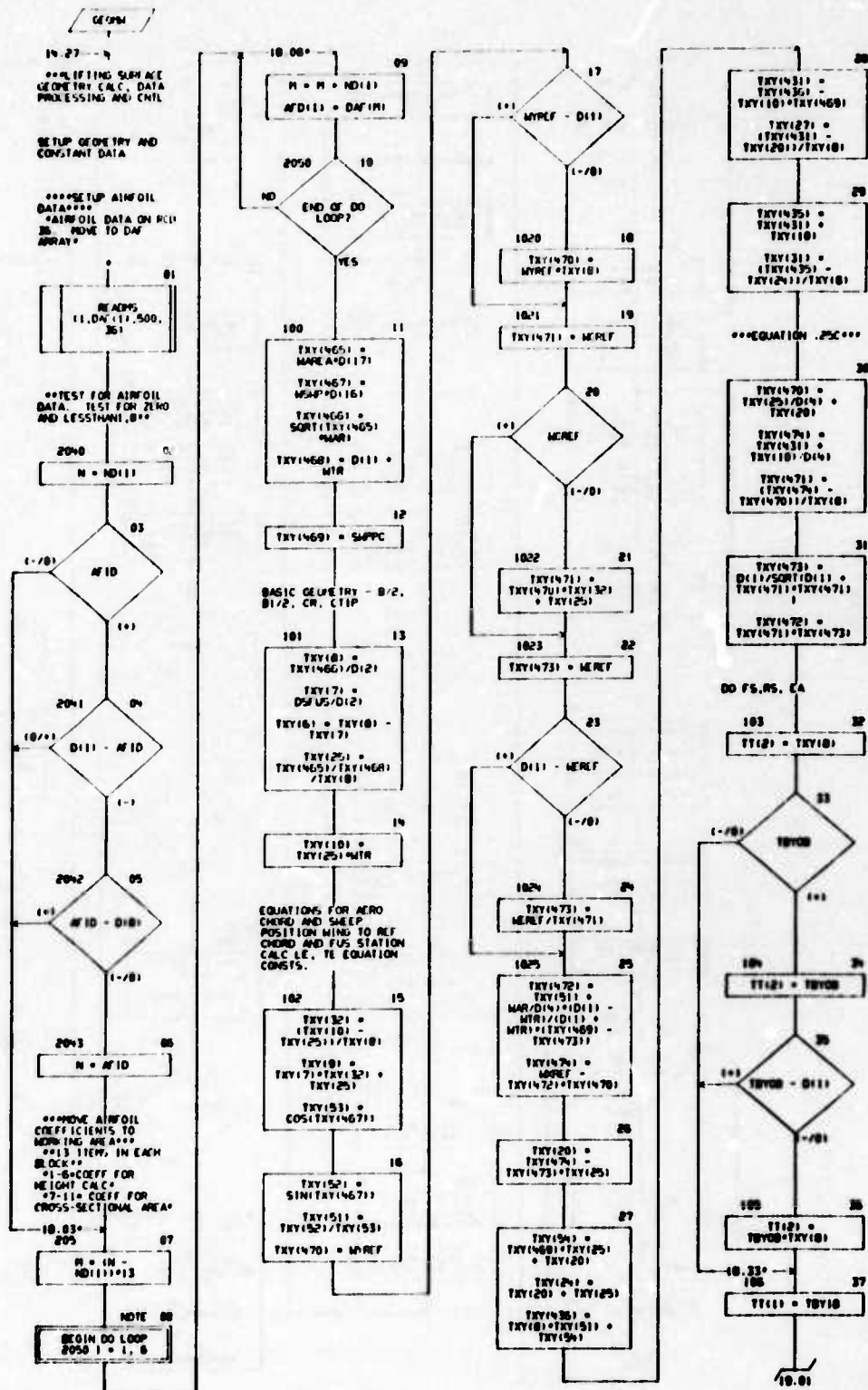
COMMENT
DIMENSION T(620),D(2060),CD(2000),ND(100),DL(100),
TOGM(4),TOFL(4),DLFL(4),DLUL(4),DWM(4),
UPM2(2),ZPM2(2),OPM2(2),OPM2(2),
DLTB(30),
DTBK(32),DLPH(10),
TRY(500),VC(200),VTC(60)
EQUIVALENCE (D(1),T(206)),(CD(1),T(121)),(ND(1),T(1612)),
(DL(1),D(140)),(TRY(1),T(80)),(VC(1),T(20)),
(VTC(1),T(35)),
(TOGM(1),D(80)),(TOFL(1),D(80)),(DLFL(1),D(94)),
(DGM(1),D(102)),(DWM(1),D(20)),(DWM(1),T(157)),(DLUL(1),D(122)),
(UPM2(1),D(205)),(ZPM2(1),D(85)),(OPM2(1),T(10)),(OPM2(1),T(20)),
(DLUL(1),D(98)),(DLUL(1),D(13)),(DGM(1),D(105)),
(DVL(1),D(87)),(DVL(1),D(207)),(DLID(1),D(66)),
(IFB(1),D(197)),
(1,ND(26)),(1,ND(154))
EQUIVALENCE (DLMS,D(250)),(DLTB(1),D(600)),(DLLE,D(601)),
(DLTE,D(602)),(DLMS,D(603)),
(DLMS,T(107)),(DLTB,T(108)),(DLLE,T(109)),(DLTE,T(190)),
(DLMS,T(110)),(DLTB,T(111)),(DLLE,T(112)),(DLTE,T(113)),
(DLPH(1),T(177)),(DTBK(1),D(108)),
(DGM,T(195))

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE GEOM*****

GEOMETRY EVALUATION AND CONTROL

CHART TITLE - SUBROUTINE GEOM4



[illegible]

```

graph TD
    10[10.40] --> 11{11.01  
YOBTC = D(1)}
    11 --> 12[12.02  
TRY(50) = YOBTC*TRY(0)]
    12 --> 13[13.03  
TRY(50) = YC(0)*TRY(50) + TRY(50) + TRY(25)]
    13 --> 14[14.04  
TRY(50) = (TRY(50)*TRY(50) + TRY(25)) / (1+TRY(0))]
    14 --> 15[15.05  
TRY(50) = TRY(50) - TRY(50)*TRY(50)]
    15 --> 16[16.06  
TRY(50) = TRY(50) - TRY(50)*TRY(50)]
    16 --> 17[17.07  
TRY(50) = TRY(50) - TRY(50)*TRY(50)]
    17 --> 18[18.08  
TRY(50) = TRY(50) - TRY(50)*TRY(50)]
    18 --> 19[19.09  
TRY(50) = TRY(50) - TRY(50)*TRY(50)]
    19 --> 20[20.10  
TRY(50) = TRY(50) - TRY(50)*TRY(50)]
    20 --> 21{21.11  
END OF DO LOOP?}
    21 -- NO --> 22[22.12  
TRY(1) = TRY(1) + TRY(10)]
    21 -- YES --> 23[23.13  
TRY(1) = TRY(1) + TRY(10)]
    23 --> 24[24.14  
TRY(1) = TRY(1) + TRY(10)]
    24 --> 25[25.15  
TRY(1) = TRY(1) + TRY(10)]
    25 --> 26[26.16  
TRY(1) = TRY(1) + TRY(10)]
    26 --> 27[27.17  
TRY(1) = TRY(1) + TRY(10)]
    27 --> 28[28.18  
TRY(1) = TRY(1) + TRY(10)]
    28 --> 29[29.19  
TRY(1) = TRY(1) + TRY(10)]
    29 --> 30[30.20  
TRY(1) = TRY(1) + TRY(10)]
    30 --> 31[31.21  
TRY(1) = TRY(1) + TRY(10)]
    31 --> 32[32.22  
TRY(1) = TRY(1) + TRY(10)]
    32 --> 33[33.23  
TRY(1) = TRY(1) + TRY(10)]
    33 --> 34[34.24  
TRY(1) = TRY(1) + TRY(10)]
    34 --> 35[35.25  
TRY(1) = TRY(1) + TRY(10)]
    35 --> 36[36.26  
TRY(1) = TRY(1) + TRY(10)]
    36 --> 37[37.27  
TRY(1) = TRY(1) + TRY(10)]
    37 --> 38[38.28  
TRY(1) = TRY(1) + TRY(10)]
    38 --> 39[39.29  
TRY(1) = TRY(1) + TRY(10)]
    39 --> 40[40.30  
TRY(1) = TRY(1) + TRY(10)]
    40 --> 41[41.31  
TRY(1) = TRY(1) + TRY(10)]
    41 --> 42[42.32  
TRY(1) = TRY(1) + TRY(10)]
    42 --> 43[43.33  
TRY(1) = TRY(1) + TRY(10)]
    43 --> 44[44.34  
TRY(1) = TRY(1) + TRY(10)]
    44 --> 45[45.35  
TRY(1) = TRY(1) + TRY(10)]
    45 --> 46[46.36  
TRY(1) = TRY(1) + TRY(10)]
    46 --> 47[47.37  
TRY(1) = TRY(1) + TRY(10)]
    47 --> 48[48.38  
TRY(1) = TRY(1) + TRY(10)]
    48 --> 49[49.39  
TRY(1) = TRY(1) + TRY(10)]
    49 --> 50[50.40  
TRY(1) = TRY(1) + TRY(10)]
    50 --> 51[51.41  
TRY(1) = TRY(1) + TRY(10)]
    51 --> 52[52.42  
TRY(1) = TRY(1) + TRY(10)]
    52 --> 53[53.43  
TRY(1) = TRY(1) + TRY(10)]
    53 --> 54[54.44  
TRY(1) = TRY(1) + TRY(10)]
    54 --> 55[55.45  
TRY(1) = TRY(1) + TRY(10)]
    55 --> 56[56.46  
TRY(1) = TRY(1) + TRY(10)]
    56 --> 57[57.47  
TRY(1) = TRY(1) + TRY(10)]
    57 --> 58[58.48  
TRY(1) = TRY(1) + TRY(10)]
    58 --> 59[59.49  
TRY(1) = TRY(1) + TRY(10)]
    59 --> 60[60.50  
TRY(1) = TRY(1) + TRY(10)]
    60 --> 61[61.51  
TRY(1) = TRY(1) + TRY(10)]
    61 --> 62[62.52  
TRY(1) = TRY(1) + TRY(10)]
    62 --> 63[63.53  
TRY(1) = TRY(1) + TRY(10)]
    63 --> 64[64.54  
TRY(1) = TRY(1) + TRY(10)]
    64 --> 65[65.55  
TRY(1) = TRY(1) + TRY(10)]
    65 --> 66[66.56  
TRY(1) = TRY(1) + TRY(10)]
    66 --> 67[67.57  
TRY(1) = TRY(1) + TRY(10)]
    67 --> 68[68.58  
TRY(1) = TRY(1) + TRY(10)]
    68 --> 69[69.59  
TRY(1) = TRY(1) + TRY(10)]
    69 --> 70[70.60  
TRY(1) = TRY(1) + TRY(10)]
    70 --> 71[71.61  
TRY(1) = TRY(1) + TRY(10)]
    71 --> 72[72.62  
TRY(1) = TRY(1) + TRY(10)]
    72 --> 73[73.63  
TRY(1) = TRY(1) + TRY(10)]
    73 --> 74[74.64  
TRY(1) = TRY(1) + TRY(10)]
    74 --> 75[75.65  
TRY(1) = TRY(1) + TRY(10)]
    75 --> 76[76.66  
TRY(1) = TRY(1) + TRY(10)]
    76 --> 77[77.67  
TRY(1) = TRY(1) + TRY(10)]
    77 --> 78[78.68  
TRY(1) = TRY(1) + TRY(10)]
    78 --> 79[79.69  
TRY(1) = TRY(1) + TRY(10)]
    79 --> 80[80.70  
TRY(1) = TRY(1) + TRY(10)]
    80 --> 81[81.71  
TRY(1) = TRY(1) + TRY(10)]
    81 --> 82[82.72  
TRY(1) = TRY(1) + TRY(10)]
    82 --> 83[83.73  
TRY(1) = TRY(1) + TRY(10)]
    83 --> 84[84.74  
TRY(1) = TRY(1) + TRY(10)]
    84 --> 85[85.75  
TRY(1) = TRY(1) + TRY(10)]
    85 --> 86[86.76  
TRY(1) = TRY(1) + TRY(10)]
    86 --> 87[87.77  
TRY(1) = TRY(1) + TRY(10)]
    87 --> 88[88.78  
TRY(1) = TRY(1) + TRY(10)]
    88 --> 89[89.79  
TRY(1) = TRY(1) + TRY(10)]
    89 --> 90[90.80  
TRY(1) = TRY(1) + TRY(10)]
    90 --> 91[91.81  
TRY(1) = TRY(1) + TRY(10)]
    91 --> 92[92.82  
TRY(1) = TRY(1) + TRY(10)]
    92 --> 93[93.83  
TRY(1) = TRY(1) + TRY(10)]
    93 --> 94[94.84  
TRY(1) = TRY(1) + TRY(10)]
    94 --> 95[95.85  
TRY(1) = TRY(1) + TRY(10)]
    95 --> 96[96.86  
TRY(1) = TRY(1) + TRY(10)]
    96 --> 97[97.87  
TRY(1) = TRY(1) + TRY(10)]
    97 --> 98[98.88  
TRY(1) = TRY(1) + TRY(10)]
    98 --> 99[99.89  
TRY(1) = TRY(1) + TRY(10)]
    99 --> 100[100.90  
TRY(1) = TRY(1) + TRY(10)]
    100 --> 101[101.91  
TRY(1) = TRY(1) + TRY(10)]
    101 --> 102[102.92  
TRY(1) = TRY(1) + TRY(10)]
    102 --> 103[103.93  
TRY(1) = TRY(1) + TRY(10)]
    103 --> 104[104.94  
TRY(1) = TRY(1) + TRY(10)]
    104 --> 105[105.95  
TRY(1) = TRY(1) + TRY(10)]
    105 --> 106[106.96  
TRY(1) = TRY(1) + TRY(10)]
    106 --> 107[107.97  
TRY(1) = TRY(1) + TRY(10)]
    107 --> 108[108.98  
TRY(1) = TRY(1) + TRY(10)]
    108 --> 109[109.99  
TRY(1) = TRY(1) + TRY(10)]
    109 --> 110[110.100  
TRY(1) = TRY(1) + TRY(10)]
    110 --> 111[111.101  
TRY(1) = TRY(1) + TRY(10)]
    111 --> 112[112.102  
TRY(1) = TRY(1) + TRY(10)]
    112 --> 113[113.103  
TRY(1) = TRY(1) + TRY(10)]
    113 --> 114[114.104  
TRY(1) = TRY(1) + TRY(10)]
    114 --> 115[115.105  
TRY(1) = TRY(1) + TRY(10)]
    115 --> 116[116.106  
TRY(1) = TRY(1) + TRY(10)]
    116 --> 117[117.107  
TRY(1) = TRY(1) + TRY(10)]
    117 --> 118[118.108  
TRY(1) = TRY(1) + TRY(10)]
    118 --> 119[119.109  
TRY(1) = TRY(1) + TRY(10)]
    119 --> 120[120.110  
TRY(1) = TRY(1) + TRY(10)]
    120 --> 121[121.111  
TRY(1) = TRY(1) + TRY(10)]
    121 --> 122[122.112  
TRY(1) = TRY(1) + TRY(10
```

CHART TITLE - SUBROUTINE GEOM

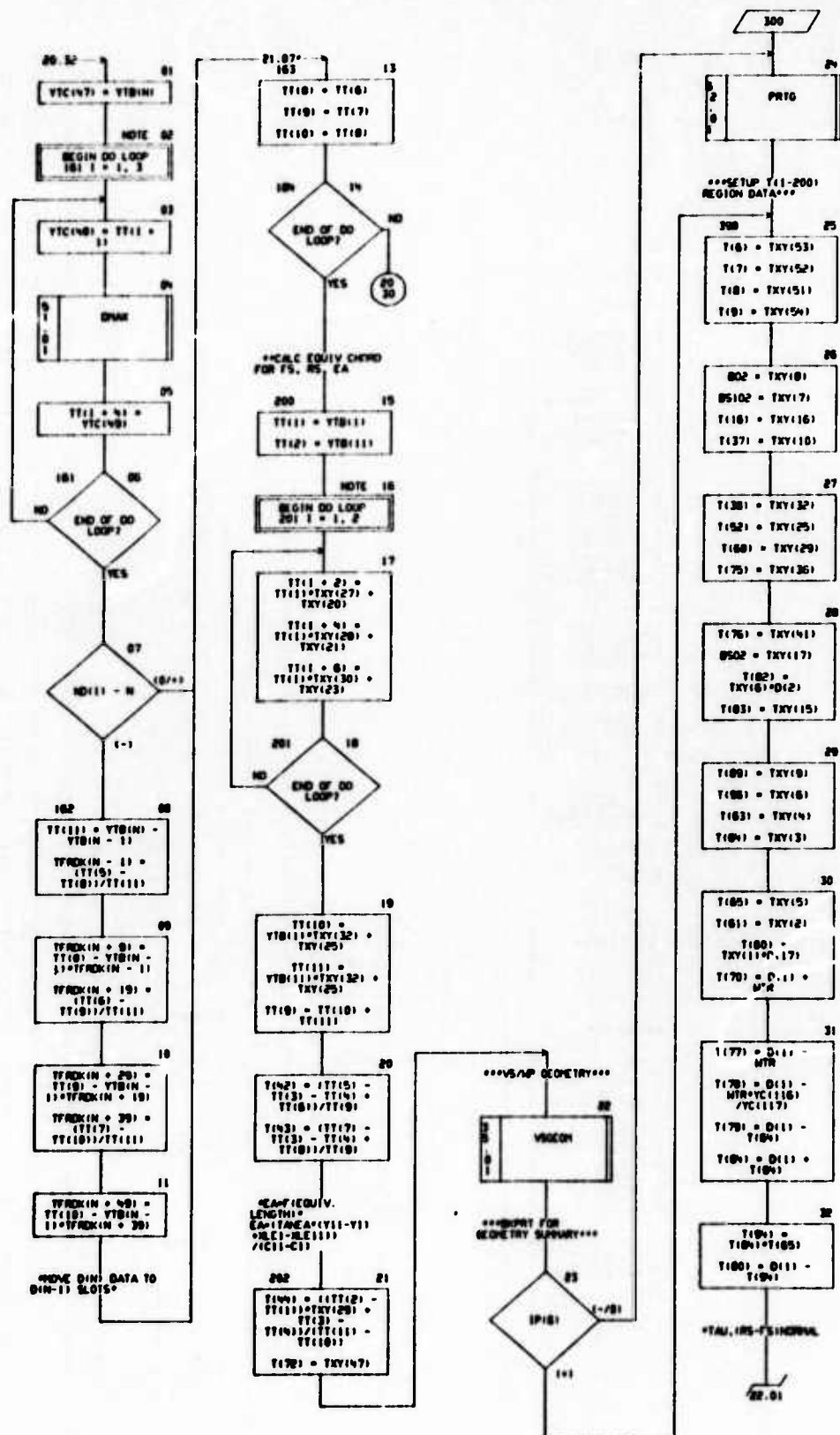


CHART TITLE - SUBROUTINE GEOPM

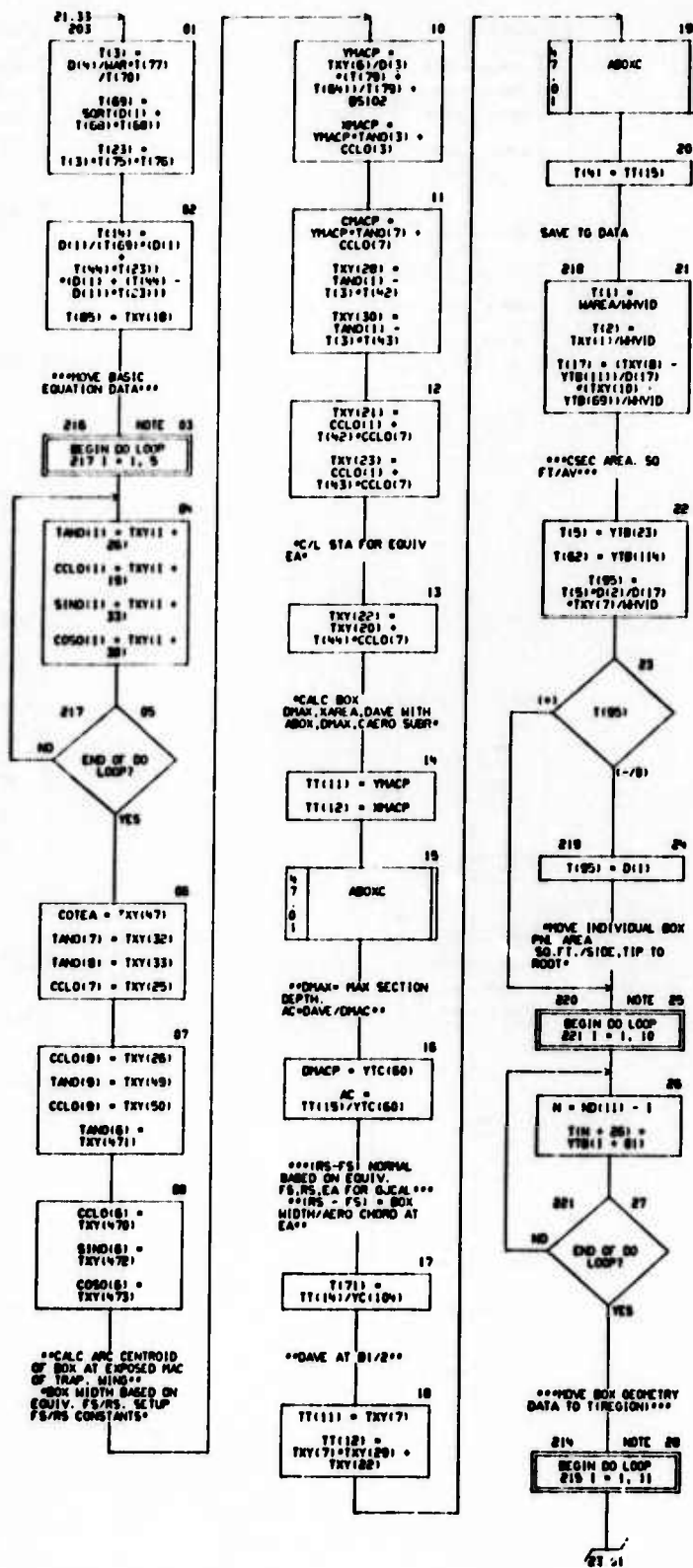
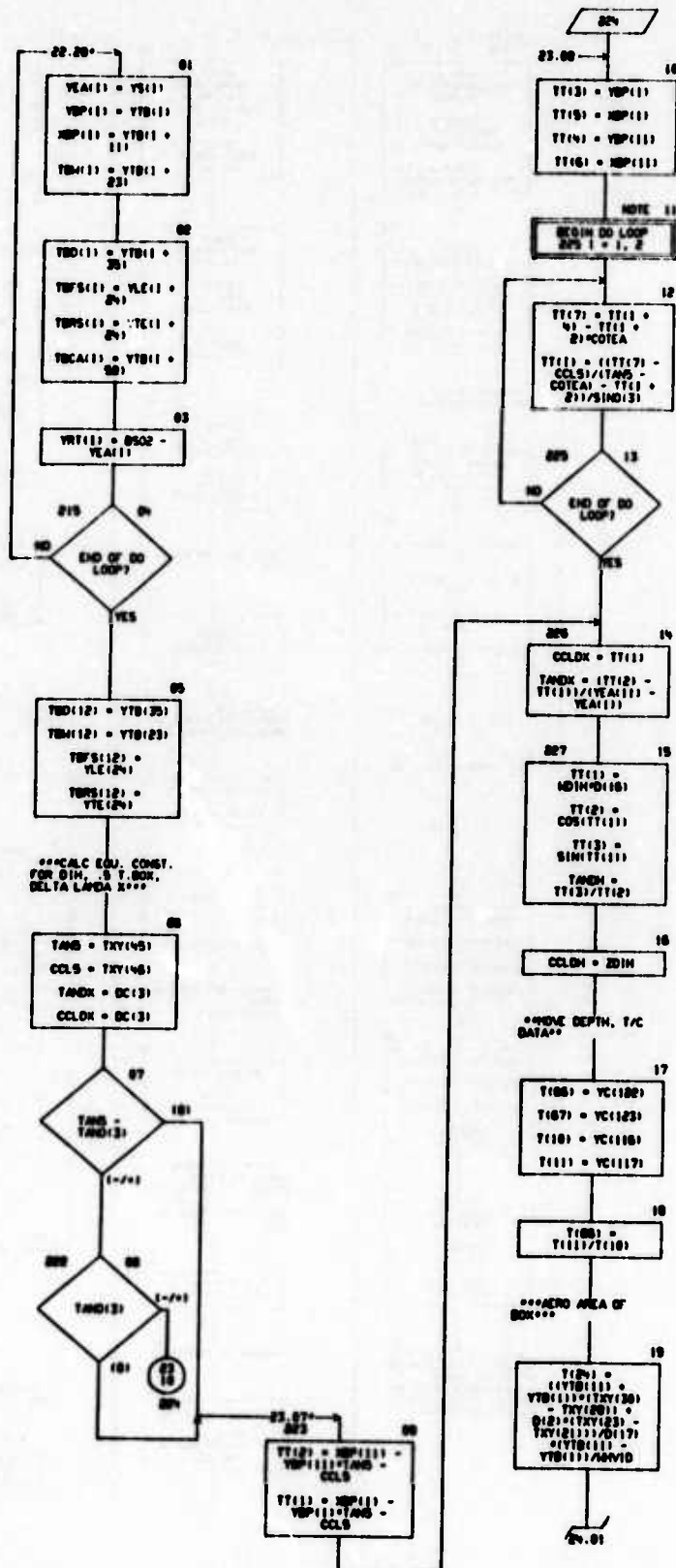


CHART TITLE - SUBROUTINE GEOM



```

23.19 ***
***SETUP GEOMETRY
DATA FOR FLUTTER
ANALYSIS***
**TGJ11-1001 FOR
NOMINAL POSITION
DATA**
**TGJ1101-2001 FOR
SHEET POSITION
SETUP BY VSGCOM**
***SAVE TGJ11-2001
ON RCD 10 FOR SUBR
GJAL**
***INITIAL SETUP FOR
BASIC GEOMETRY***

```

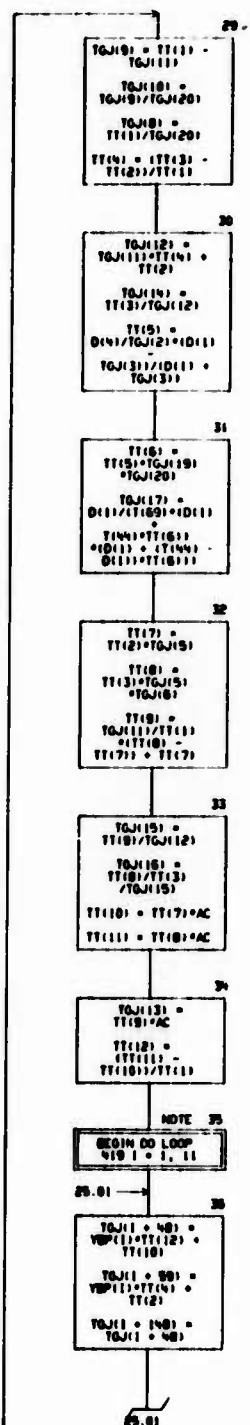
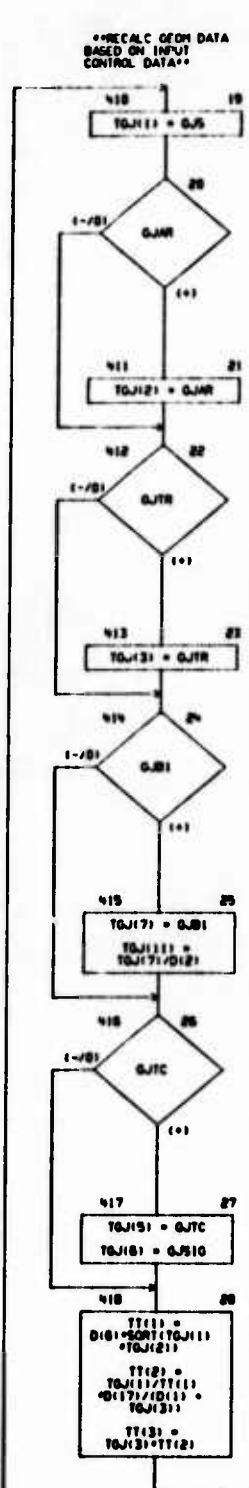
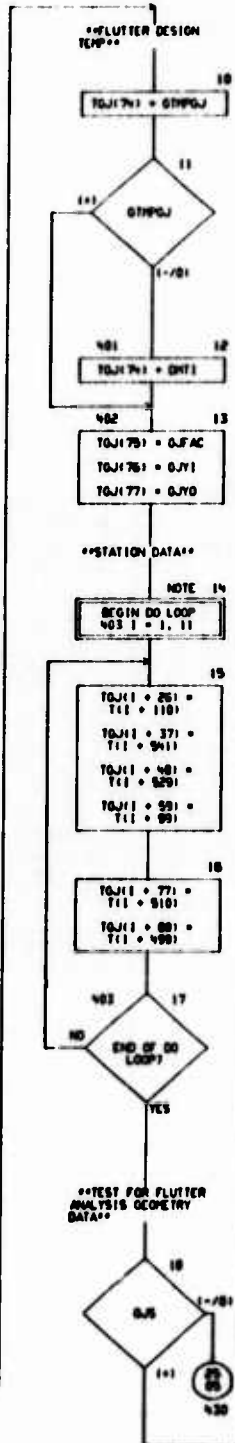
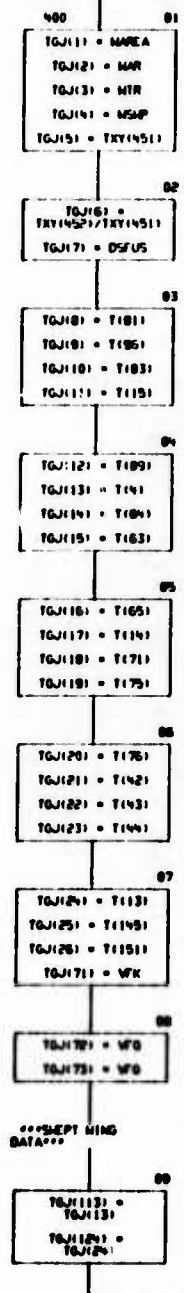


CHART TITLE - SUBROUTINE GEOM

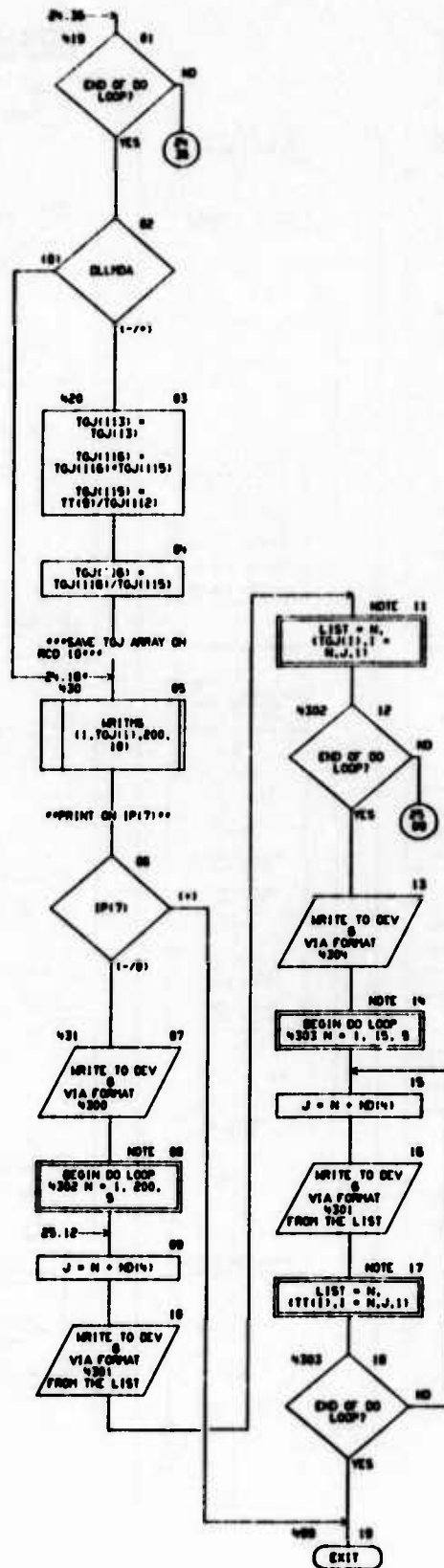


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6320)
COMMON /IPRINT/ IP(80)
DIMENSION D(206), DC(100), TXY(500), TT(20), ND(100)
, TB(8)(3), TB(8)(3), YTB(12), TDB(12), TBM(12), XBP(11), YBP(11)
, VRT(11), TBF(11), TBF5(11), TBF5(12), YEA(11), TAN(19), CCLO(9)
, SIND(6), COSO(6), YLE(10), YTE(10), YS(11)
, TFRDK(60)
, YC(150), YC(60)
, DAF(500), AFD(6)
, TGJ(200)
EQUIVALENCE (D(1),T(206)), (ND(1),T(612))
, (BO2,T(112)), (OSO2,T(81)), (TBCA(1),T(100)), (VRT(1),T(111))
, (TAND(1),T(122)), (CCLO(1),T(131)), (SIND(1),T(140))
, (COSO(1),T(146)), (COTE(1),T(152)), (TBF5(1),T(153))
, (TBF5(1),T(165)), (XBP(1),T(140)), (YBP(1),T(500))
, (YEA(1),T(511)), (TDB(1),T(530)), (TBM(1),T(542))
, (TXY(1),T(801)), (TT(1),T(1317))
, (YTB(1),TXY(50)), (YLE(1),TXY(179)), (YTE(1),TXY(280))
, (YS(1),TXY(490)), (AFD(1),T(141)), (DAF(1),T(1401))
, (TB(8)(1),D(125)), (TB(8)(1),D(135)), (TBYB,D(128))
, (TBYOB,D(128)), (TCIB,D(124)), (TMSIG,D(1245)), (YBTC,D(141))
, (TGJ(1),T(176)), (GTMPGJ,D(262)), (DMT(1),D(259))
, (GJS,D(1340)), (GJAR,D(1341)), (GJTR,D(1342)), (GJB(1),D(1343))
, (GJTC,D(1344)), (GJSIG,D(1345))
, (WFK,D(1252)), (WFO,D(1253)), (WFG,D(1254)), (GFAC,D(1312))
, (GJY(1),D(1313)), (GJYO,D(1315))
EQUIVALENCE (CSHO,D(1480)), (HNRV(1),T(57))
, (YBTC,D(142)), (DYPVT,D(200)), (DMPVT,D(201)), (HAREA,D(1240))
, (HAR,D(1241)), (HTR,D(1244)), (HSP,D(1242)), (SHPPC,D(134))
, (DSFJS,D(1246))
, (DC(1),D(1401)), (AFD,D(143))
, (N,ND(30)), (NDCT,ND(58))
, (TANDX,T(87)), (CCLOX,T(88)), (TANDH,T(90)), (CCLOH,T(91))
, (TANDS,T(92)), (CCLOS,T(93)), (NDIH,D(1247)), (ZDIH,D(1248))
, (TFRDK(1),T(186))
, (YC(1),T(201)), (YTC(1),T(351))
, (MYREF,D(175)), (HREF,D(176)), (HREF,D(177)), (HREF,D(178))
, (YHACP,T(53)), (HACP,T(54)), (CHACP,T(55)), (DHACP,T(56))
, (AC,T(13)), (OSIO2,T(15))
, (LLPDA,D(1320))
4300 FORMAT (44H) ***GEOM SUBR. FLUTTER GEOMETRY DATA***,40X,20H**
GEOM - IP(7) ** ,/END TGJ
4301 FORMAT (3X,13.5E16.8)
4304 FORMAT (6H0 TT)

```

06/10/76

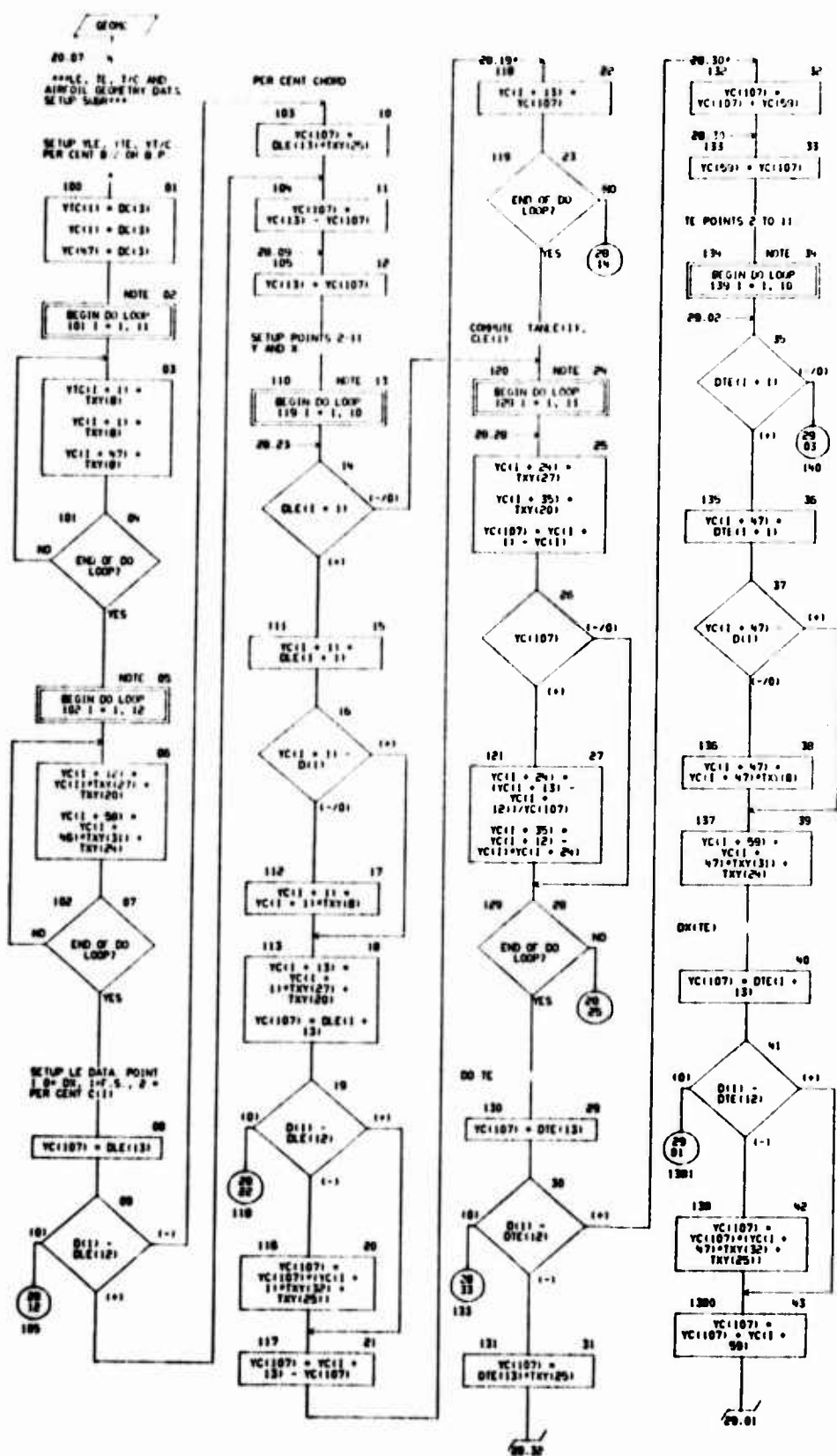
AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 27

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE GEOME*****

PLATFORM GEOMETRY AND T/C DATA SETUP

CHART TITLE - SUBROUTINE GEOMC



```

graph TD
    Start([START]) --> 26_10[26 10]
    26_10 --> 26_11[26 11]
    26_11 --> 26_12[26 12]
    26_12 --> 26_13[26 13]
    26_13 --> 26_14[26 14]
    26_14 --> 26_15[26 15]
    26_15 --> 26_16[26 16]
    26_16 --> 26_17[26 17]
    26_17 --> 26_18[26 18]
    26_18 --> 26_19[26 19]
    26_19 --> 26_20[26 20]
    26_20 --> 26_21[26 21]
    26_21 --> 26_22[26 22]
    26_22 --> 26_23[26 23]
    26_23 --> 26_24[26 24]
    26_24 --> 26_25[26 25]
    26_25 --> 26_26[26 26]
    26_26 --> 26_27[26 27]
    26_27 --> 26_28[26 28]
    26_28 --> 26_29[26 29]
    26_29 --> 26_30[26 30]
    26_30 --> 26_31[26 31]
    26_31 --> 26_32[26 32]
    26_32 --> 26_33[26 33]
    26_33 --> 26_34[26 34]
    26_34 --> 26_35[26 35]
    26_35 --> 26_36[26 36]
    26_36 --> 26_37[26 37]
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    26_38 --> 26_39[26 39]
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    26_40 --> 26_41[26 41]
    26_41 --> 26_42[26 42]
    26_42 --> 26_43[26 43]
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    26_44 --> 26_45[26 45]
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    26_48 --> 26_49[26 49]
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    26_58 --> 26_59[26 59]
    26_59 --> 26_60[26 60]
    26_60 --> 26_61[26 61]
    26_61 --> 26_62[26 62]
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    26_63 --> 26_64[26 64]
    26_64 --> 26_65[26 65]
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    26_68 --> 26_69[26 69]
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    26_72 --> 26_73[26 73]
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    26_76 --> 26_77[26 77]
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    26_78 --> 26_79[26 79]
    26_79 --> 26_80[26 80]
    26_80 --> 26_81[26 81]
    26_81 --> 26_82[26 82]
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    26_94 --> 26_95[26 95]
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    26_97 --> 26_98[26 98]
    26_98 --> 26_99[26 99]
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    26_104 --> 26_105[26 105]
    26_105 --> 26_106[26 106]
    26_106 --> 26_107[26 107]
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    26_109 --> 26_110[26 110]
    26_110 --> 26_111[26 111]
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    26_117 --> 26_118[26 118]
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    26_122 --> 26_123[26 123]
    26_123 --> 26_124[26 124]
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    26_143 --> 26_144[26 144]
    26_144 --> 26_145[26 145]
    26_145 --> 26_146[26 146]
    26_146 --> 26_147[26 147]
    26_147 --> 26_148[26 148]
    26_148 --> 26_149[26 149]
    26_149 --> 26_150[26 150]
    26_150 --> 26_151[26 151]
    26_151 --> 26_152[26 152]
    26_152 --> 26_153[26 153]
    26_153 --> 26_154[26 154]
    26_154 --> 26_155[26 155]
    26_155 --> 26_156[26 156]
    26_156 --> 26_157[26 157]
    2
```

CHART TITLE - SUBROUTINE GEORG

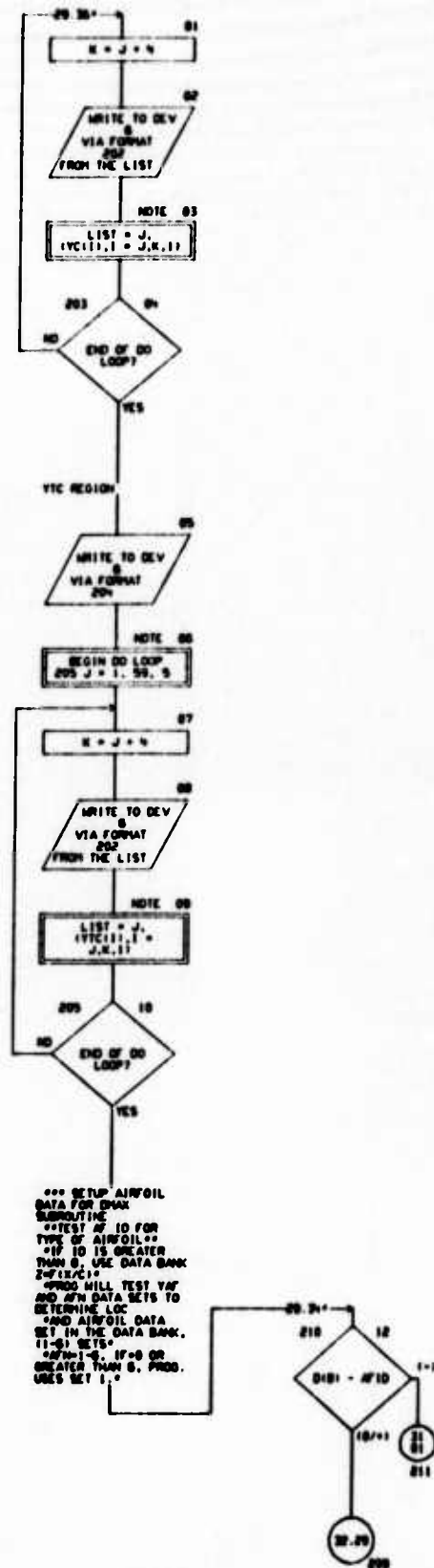
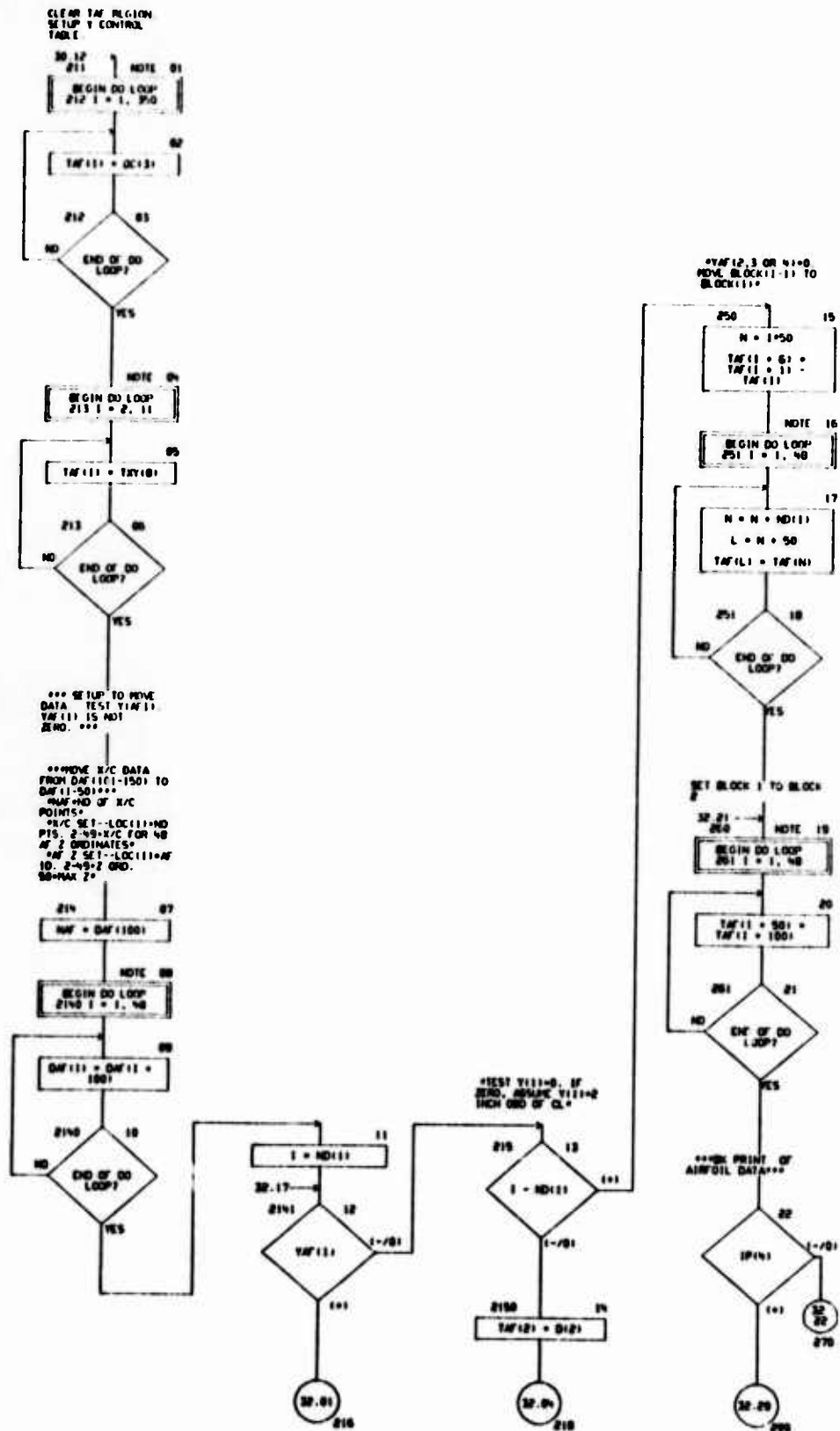


CHART TITLE - SUBROUTINE GEOM



[illegible]

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6320)
COMMON /PRINT/ IP(80)
DIMENSION D(2000), CD(2000), ND(100), DC(100)
, TXY(500), VTC(60), YC(150)
, DAF(500), BLE(23), DTE(23), DTC(22), AFN(4), YAF(4)
, TAF(350)
EQUIVALENCE (D(1),T(2061)), (CD(1),T(4121)), (ND(1),T(6121))
, (AF10,D(143)), (YAF(1),D(145)), (AFN(1),D(149))
, (BLE(1),D(1805)), (DTE(1),D(2008))
, (DTC(1),D(2031)), (DC(1),D(1401))
, (YC(1),T(201)), (VTC(1),T(351)), (TAF(1),T(431))
, (TXY(1),T(601)), (DAF(1),T(1401))
, (NAF,ND(67))
201 FORMAT (5H1 YC,6X,15H** DECHC - (P(4) **))
202 FORMAT (1H 15,5C16.7)
204 FORMAT (6H0 YTC )
271 FORMAT (5H0 TAF,7X,3H1 =,15,5X,3H1 =,15,5X,3H1 =,15,45X,
15H** DECHC - (P(4) **))
272 FORMAT (1H , 15, 5C16.7)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE VSCECH*****

ROTATED SURFACE PLATFORM GEOMETRY EVALUATION

CHART TITLE - SUBROUTINE VSGEOM

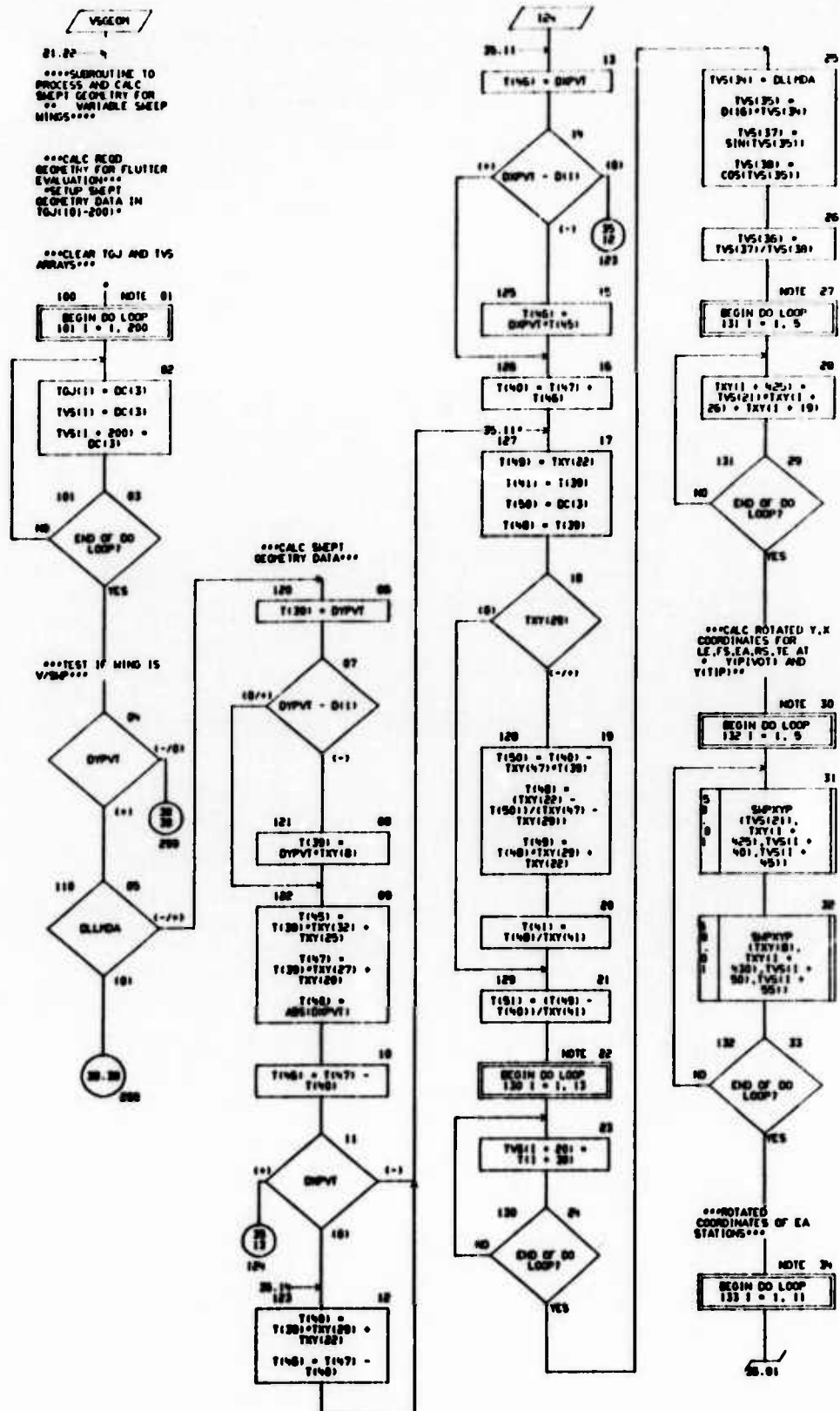
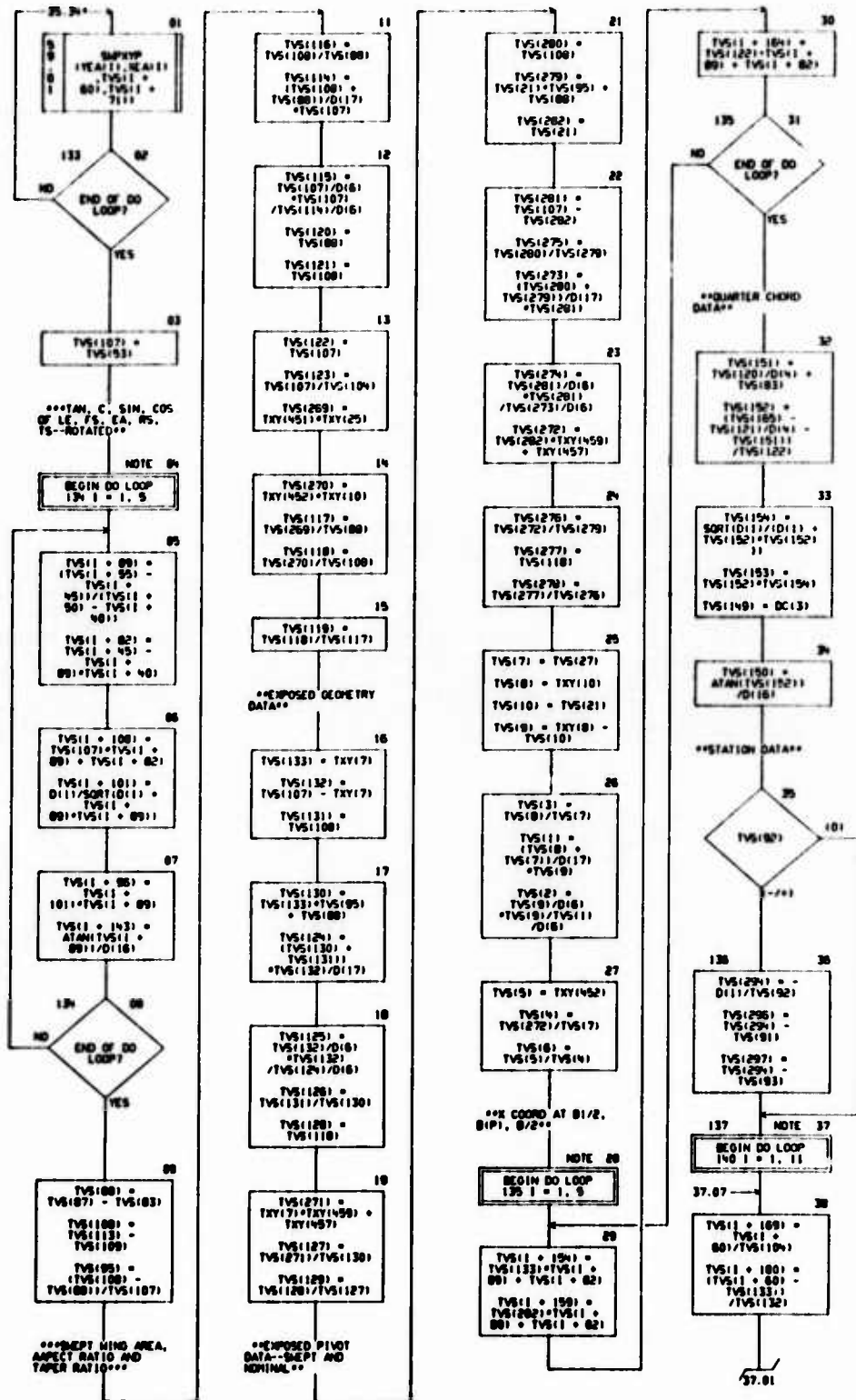


CHART TITLE - SUBROUTINE VS6E01



1190

CHART TITLE - SUBROUTINE VS600H

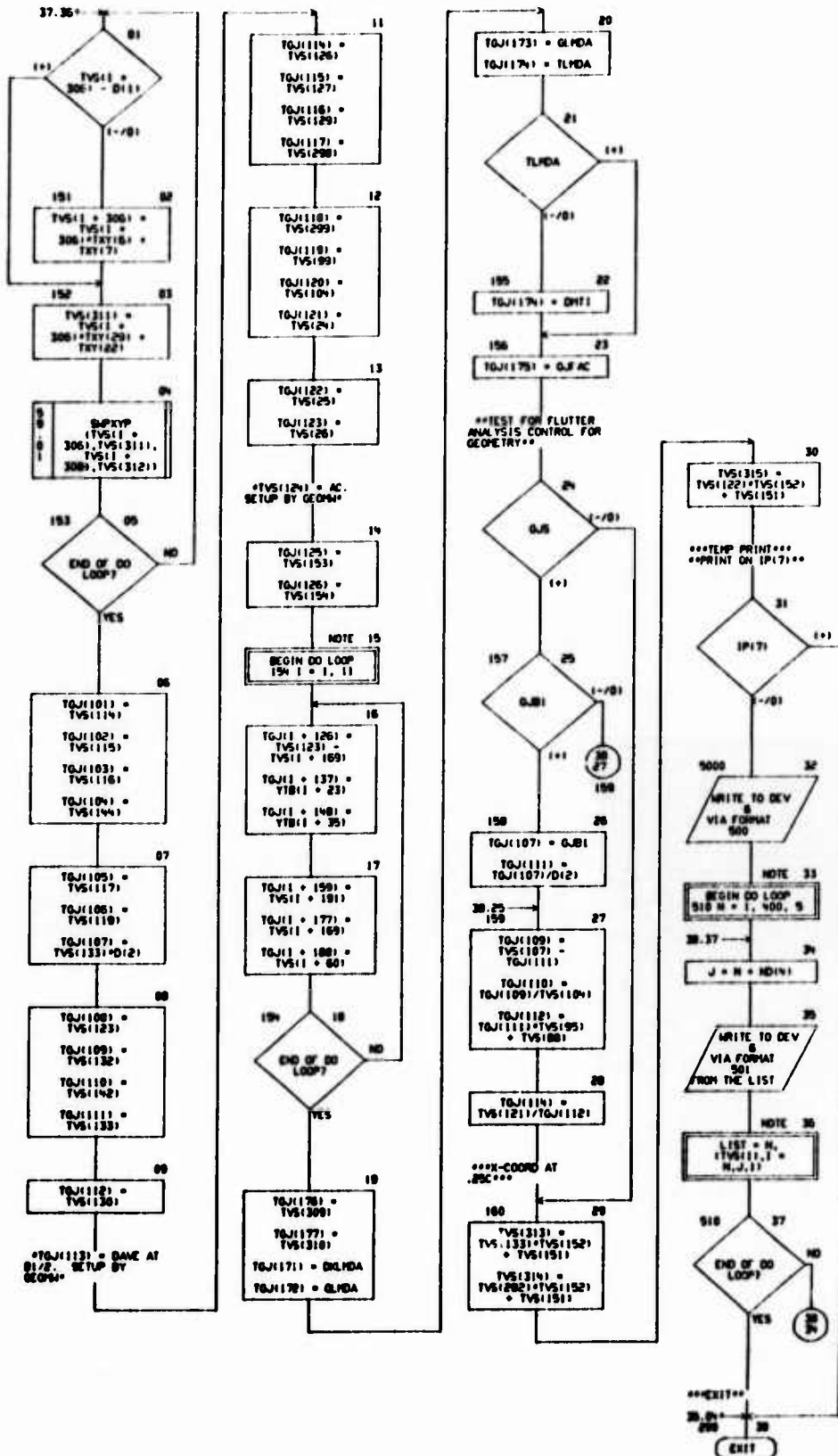


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2000),D(2000),CD(2000),ND(100)
COMMON /IPRINT/ IP(80)
DIMENSION TX(500),TVS(400),TGJ(200),
          YTB(124),YS(111),YEA(111),NEA(111),
          BC(100),TT(24)
EQUIVALENCE (TX(1),T(601)),(TVS(1),CD(601)),(TGJ(1),T(1761)),
          (YTB(1),TX(501)),(YS(1),TX(400)),
          (YEA(1),YTB(11)),(NEA(1),YTB(12)),
          (DTPVT,D(200)),(DTPVT,D(201)),(DLMDA,D(320)),
          (GJV(1),D(313)),(GJV,D(315)),(GFAC,D(312)),(DMT,D(250)),
          (GLMDA,D(321)),(GLMDA,D(322)),(TLMDA,D(323)),(DKLMDA,D(324)),
          (GJS,D(340)),(GJB,D(343)),
          (DC(1),D(1401)),(TT(1),T(1317))
500  FORMAT (30H)  ***SHEEP MIND GEOMETRY*** .50X,20H** VSOCOM - IP(7)
      **/END TVS)
501  FORMAT (3X,13,5E16.0)

```

05/10/74

AUTOLOW CHART SET - SWEEP

WING AND ENGINE NOISE MEAS

PAGE 40

CHART TITLE - INTERMEDIATE COMMENTS

*****SUBROUTINE TORQUE*****

TORQUE-BOX SECTION GEOMETRY EVALUATION

CHART TITLE - SUBROUTINE YINDEX

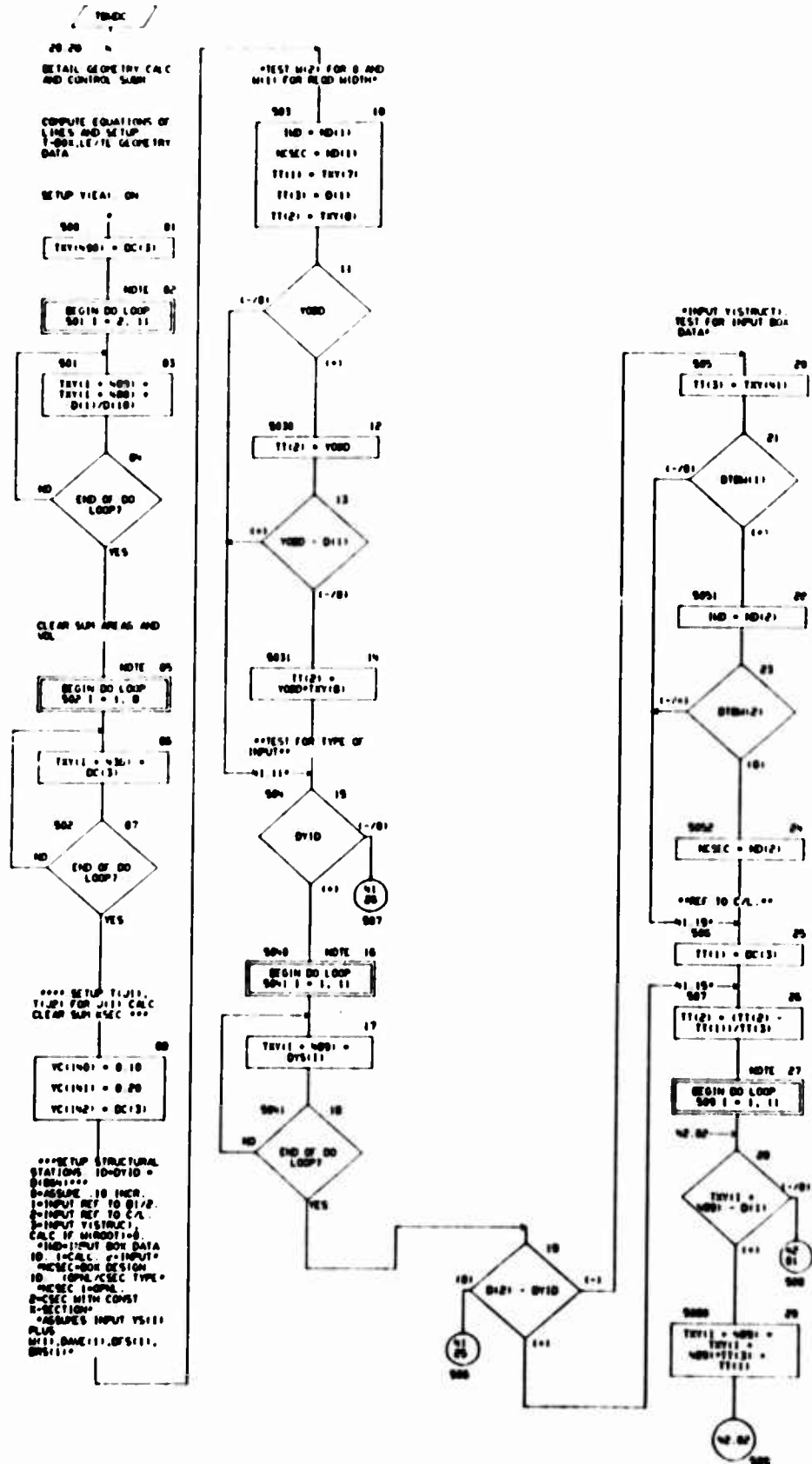


CHART TITLE - SUBROUTINE TONE

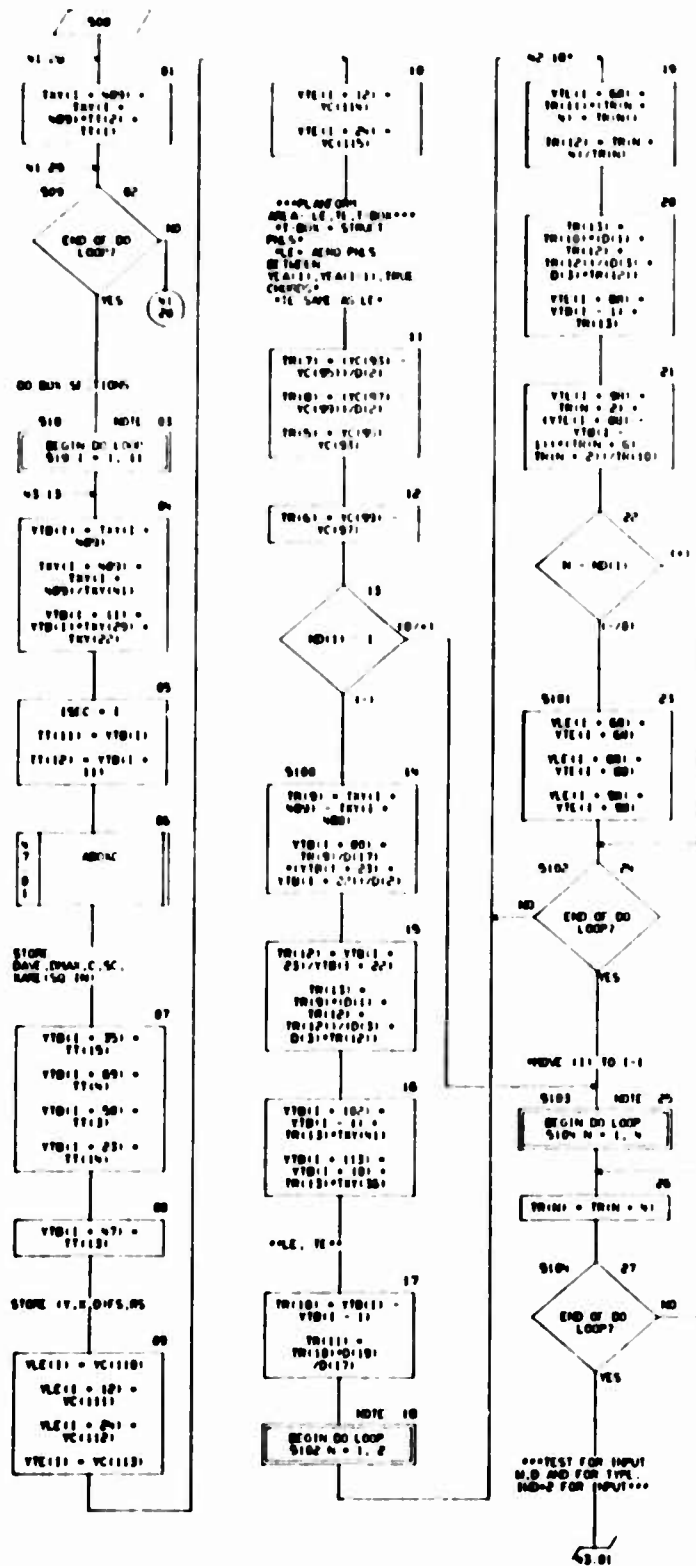
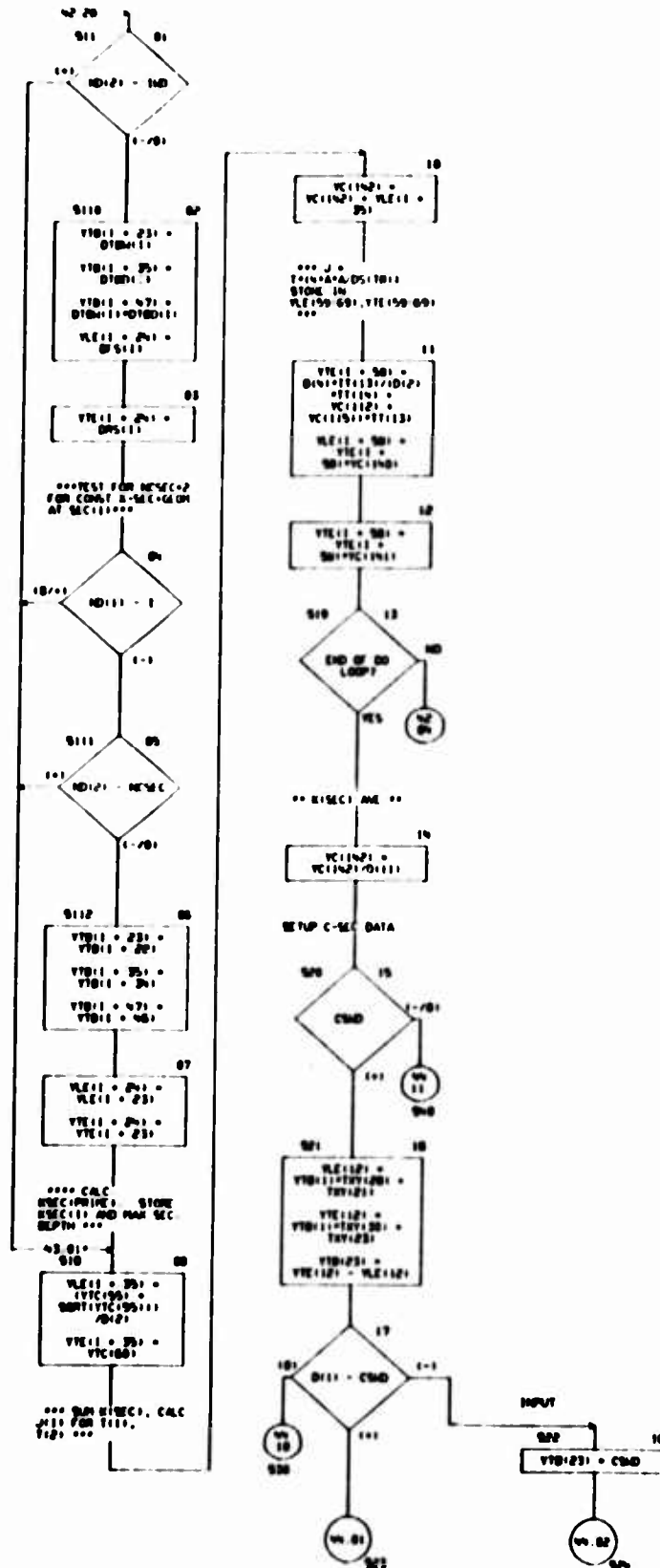


CHART TITLE - SUBROUTINE TONEK



[illegible]

CHART TITLE - NEW PNEUMATIC STATEMENTS

```

COMMON /105/0
COMMON /105/1/ (P100)
DIMENSION D(2000), CD(2000), ND(100), DC(100)
, DPT(4), DYS(10), DTM(10), DS(10), DMS(10), D10(10)
, VEC(60), VC(150), TAY(500)
, TTD(120), VLE(100), VTE(100), T1(20)
, T2(10)
EQUIVALENCE (D(1),T(2001)), (CD(1),T(4121)), (ND(1),T(6121))
, (DC(1),D(1401)), (VLE(1),D(1391)), (DPT(1),D(471)), (CS(1),D(1401))
, (CWS,D(1501)), (D10,D(1411)), (DYS(1),D(1051))
, (DTM(1),D(1071)), (D10(1),D(1071)), (DS(1),D(1001))
, (DMS(1),D(1001)), (ND(1),D(1431))
, (TTD(1),T(1551)), (VLE(1),T(1171)), (VTE(1),T(11201))
, (VC(1),T(2011)), (VTE(1),T(1511)), (TAY(1),T(1011))
, (T1(1),T(13171))
, (T2(1),T(13171))
INSEC,ND(100),TSEC,ND(50),TMD,ND(11)
, (T1(1),T(13171))
9002  FORMAT(1H,010,ND*** SPAN (CALLED FROM TONEK AND GEOM) - (P10) **
      )
9004  FORMAT(10H      T1A)      R1A)      C1A)      SPAN
      C/C      D(1)      C(1)      C/C      )

```

CHART TITLE - INTERIMINARY COMMENTS

*****SUBMITTING DATA*****

*****THE DATA GROUPS WILL BE A INDICATION*****

CHART TITLE - SUBROUTINE ABONE

ABONE
 OF 15
 FORMS (00) 1-10
 AREA CALC. SUB

REVISION -- 11-25-66
 -- CURVED LE. 11.
 T/C
 09-14-66 -- NEW SUB

COMPUTE BY STRUCTURAL
 SECTION AREA AT EA.
 (P.S., P.P., D.M.A.I.E.A.,
 B.A.L.)
 A*
 SURFDELTA(C) = (D1/J1
 *D1) * 1/10
 DELTA(C) = C1SE/10

SETUP CHORD DATA
 V1, B1 = OP AND P S
 T1(1)=1
 T1(2)=0
 COORD AT P.S. IS NORMAL
 TO EA

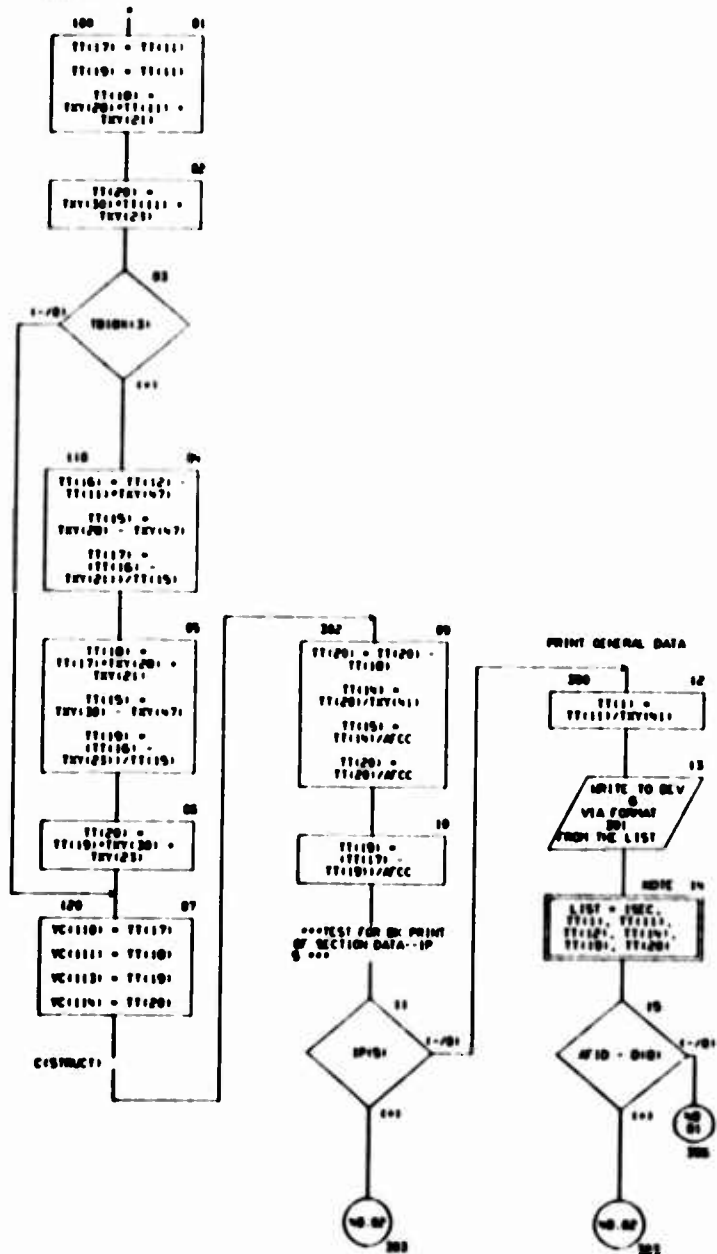
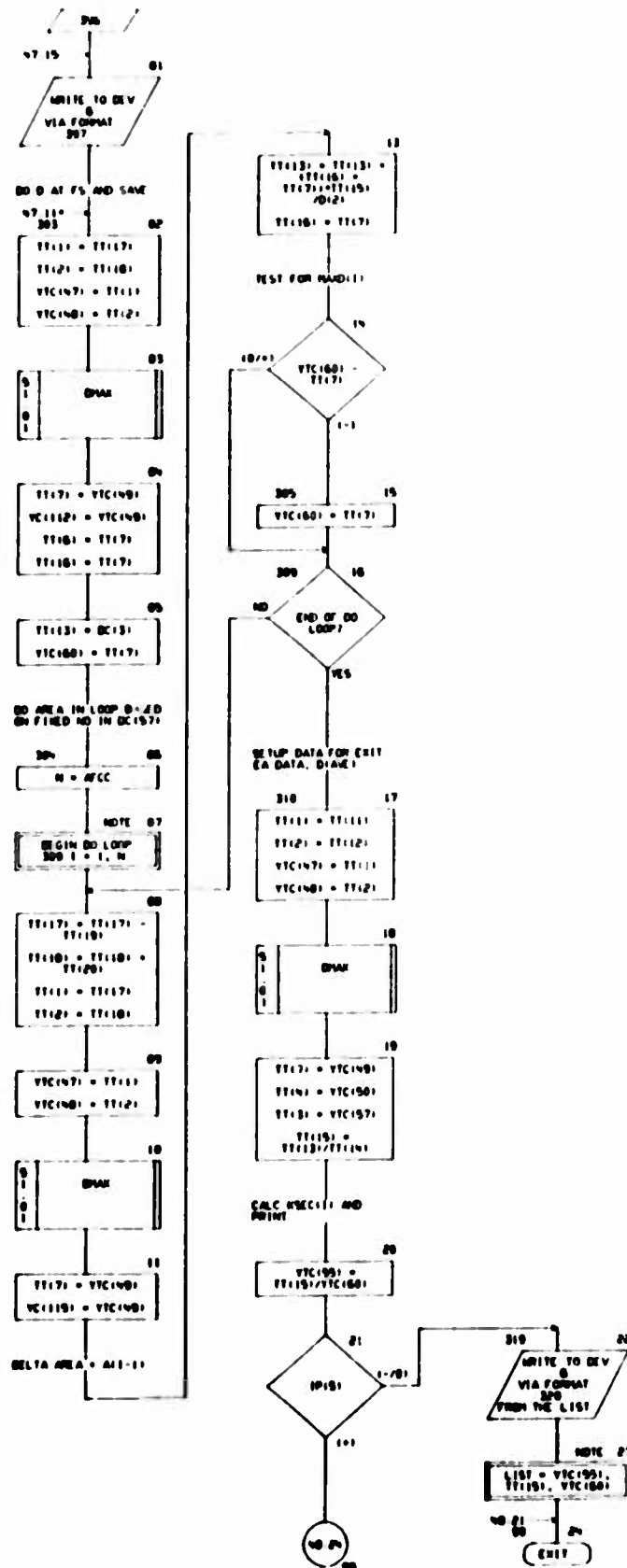


CHART TITLE - SUBROUTINE ADRHC



```

COPPON 1:6320
COPPON 1:PRINT// IP(00)
DIMENSION D(2063), CD(2000), MD(100), DC(100), TV(500)
, TT(20), VTC(00), VC(150)
, T010(3)
EQUIVALENCE (D(1),T(063)), (CD(1),T(1213)), (MD(1),T(6123))
, (T010(1),D(125)), (VTC(1),D(153))
, (DC(1),D(140))
, (VC(1),T(201)), (VTC(1),T(351)), (TV(1),T(001))
, (TT(1),T(1317))
, (M,MD(30)), (SEC,MD(95)), (DK,MD(20))
EQUIVALENCE (AF(0),D(143))
FORMAT (10H) SECTION MD 13,018,20*** ABOVE AND BMAX - IP(5) :
/ 200,SHFT(1),F11 3/200,SHFT(11),F11 3/200,SHFT(12),F11 3/
200,SHFT(14),F11 3/200,SHFT(10),F11 3/200,SHFT(20),F11 3)
FORMAT(
END= V(4)
C(4) C(4) BMAX DC/C D(1) C(0)
C/C 1
FORMAT (20H) 11SEC= ' 9.01 DME=7.3.04 BMAX=7.3)

```

00:10:76

AUTOLON CHART SET - SARP MING. REF. EPOXIDIC RESIN - PAGE 50

CHART TITLE: INTERMEDIATE CURRENTS

*****SUBROUTINE EVAL*****

AIRFOIL DEPTH EVALUATION

100

```

VIC(47.50) = V(1),
N(1)
VIC(49.50) = 0(1),
D(1)
END(1)

```

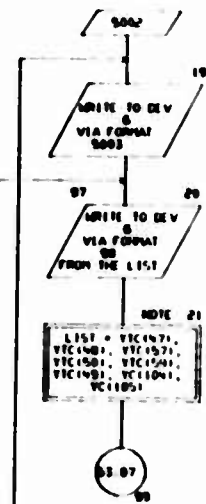


CHART TITLE - SUBROUTINE SWAP

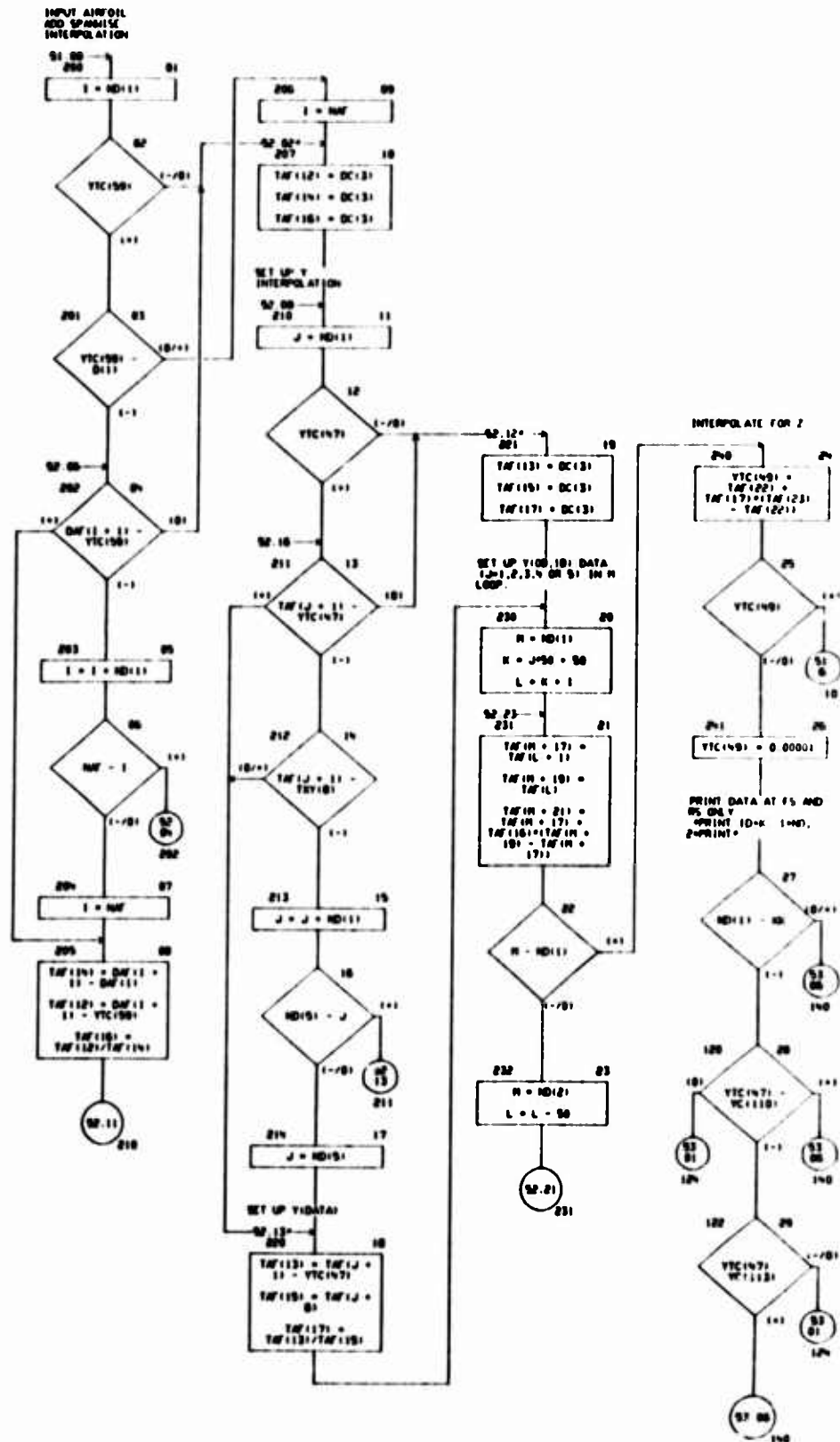


CHART TITLE - SUBROUTINE DATA

PRINT LINES
1=1, MAY, J.K.L
2=TAF (1-5)
3=TAF (7-11)
4=TAF (12-17)
5=TAF (18-23)
6=TAF (1L-20), TAF (1L-40)
TAF (1L), TAF (1L-1)

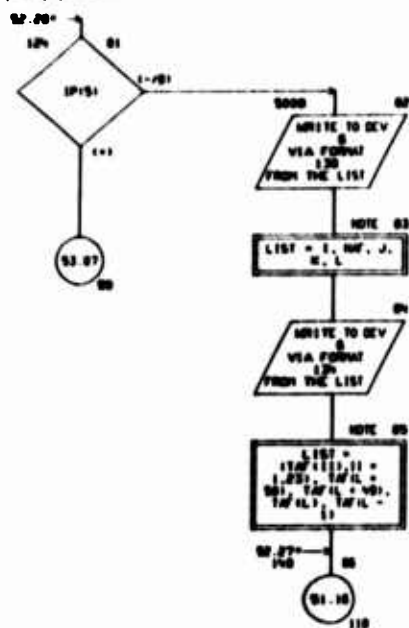


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T161201
COMMON /IPRINT/ IP1001
DIMENSION D(2000), CD(2000), ND(100), BC(100)
, TV(1500), DAF(500), TAF(350), VC(150), VTC(100)
, AFD(6), BIPRT(4)
EQUIVALENCE (D(1),T1205(1)), (CD(1),T1412(1)), (ND(1),T1612(1))
, (BC(1),D(1401)), (AF(1),D(143)), (BIPRT(1),D(147))
, (VC(1),T1201(1)), (VTC(1),T125(1)), (AFD(1),T141(1))
, (TAF(1),T143(1)), (TV(1),T100(1)), (DAF(1),T140(1))
, (ND(1),ND(67))
, (ND(1),ND(20))
5001 FORMAT(50H      T1A)      B1A)      C1A)      BPAK      0
&C      D(1)      C(1)      C/CO      1
60  FORMAT (14H 34.0711.3)
120  FORMAT (14H011.NAF,J,K,L), 10H, 917 1
134  FORMAT(8H12 4 / 6H,912 4 / 6H,2112 6,912 41,2112 6 /
&H, 012 6 / 6H, 412 6 1

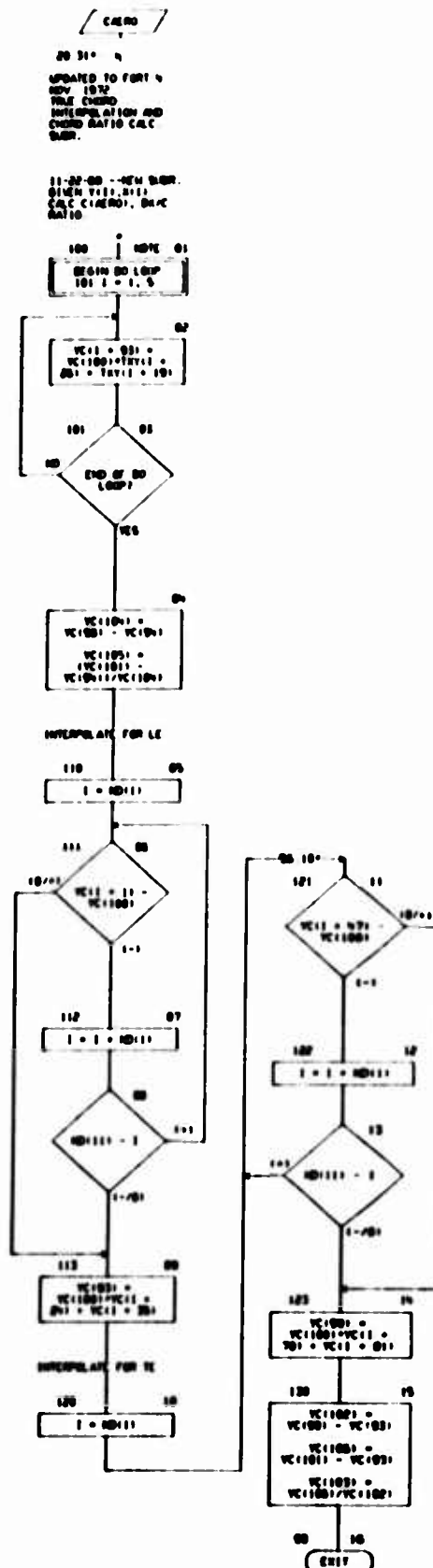
```


CHART TITLE - INTRODUCTION COMMENTS

*****SUBROUTINE CARED*****

TRAPEZOIDAL/TOTAL PLATFORM CHECKED EVALUATION

CHART TITLE - SUBROUTINE CZERO



05/10/74

AUTOFLOW CHART SET - SHEEP - MING AND EMPLOYEE PERKIE - PAID 57

CHART TITLE NEW PROCEDURAL STATEMENTS

COMMON F16320

DIMENSION D12000, CD12000, ND100, BC100

,FV1500, VC150

EQUIVALENCE (D11,F12001), (CD11,F12121), (ND11,F16121)

, (BC11,D1401), (VC11,F1201), (FV11,F1001)

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****SUBROUTINE SAFETY*****

EVALUATION OF S.Y. CORRD. OF RELATED POINT - V-TAP PLACEMENT

.....

CHART TITLE - SUBROUTINE SHELVP1, L, WP, WP1

/ SHELVP /
 1
 20 31 - 4
 ***SUB TO CALC
 COORDINATES OF
 PTIN, 21 ROTATED
 * (L, 21 DELTA
 LAMBDA DEGREES)
 * REF ROTATION
 PT=WP, WP1
 *CORD OF PTIN, 21
 AFTER ROTATION =
 1WP, WP1*

*DELTA LAMBDA AND
 SIN, COS OF DELTA
 LAMBDA GIVEN*

**CALC LENGTH, SIN
 AND COS**

01
 TT(1) = V - WP
 TT(2) = E - WP
 TT(3) =
 SQRT(TT(1)**2 + TT(2)**2)

02
 TT(4) =
 TT(2)/TT(3)
 TT(5) =
 TT(1)/TT(3)

**SIN, COS OF
 ROTATED LINE**

03
 TT(6) =
 SIN(L*TT(5) +
 COS(L*TT(4))
 TT(7) =
 COS(L*TT(5) -
 SIN(L*TT(4))

**CORD OF ROTATED
 PT**

04
 WP = WP +
 TT(3)*TT(7)
 WP1 = WP +
 TT(3)*TT(6)

05
 EXIT

CHART TITLE - NON PROTECTURAL STATEMENTS

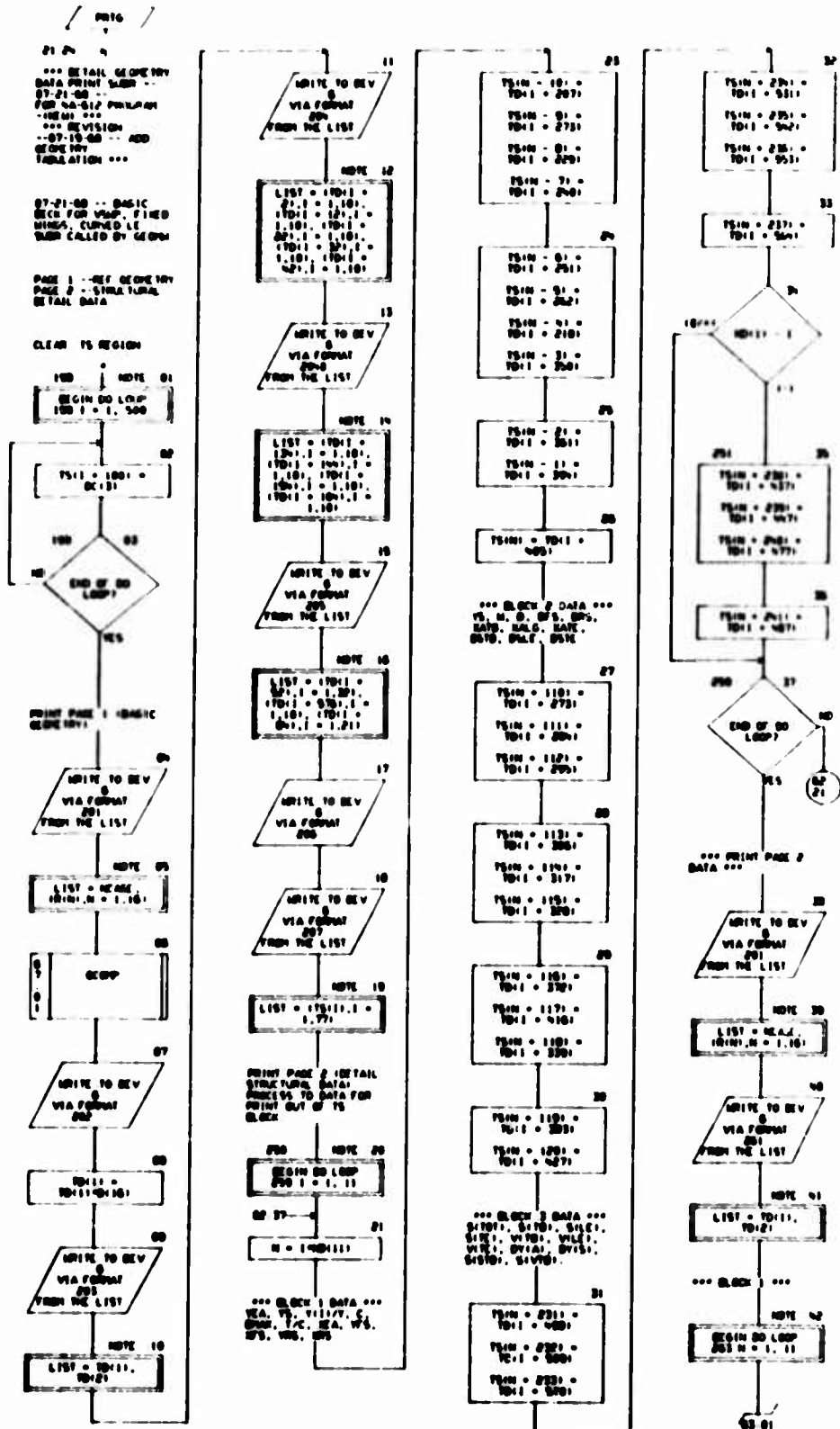
COMMON T12000, D12000, CD12000, AD100
DIMENSION T1V1000, T1V1400,
T1400
COMMONWEALTH T1V100, T10011, T1V111, CD10011,
T1V1, T1V1211, T1V1, T1V1211,
T1V1, T1V1211, T1V1, T1V1211,
T1V1, T1V1211, T1V1, T1V1211,
T1V1, T1V1211

CHART TITLE - INTERNAL COMMENTS

****SUBROUTINE PRIG****

GEOTECH SURVEY PRINTED OUTPUT

CHART TITLE - SUBROUTINE PRIG




```

graph TD
    01[01  
K = N * 1000000000  
J = K - 1000000000] --> 02[02  
WRITE TO DEV  
VIA FORMAT  
FROM THE LIST]
    02 --> 03[03  
LIST = N, 17511, J, 11]
    03 --> 04{04  
END OF DO  
LOOP?}
    04 -- NO --> 05[05  
*** BLOCK 2 ***]
    04 -- YES --> 06[06  
WRITE TO DEV  
VIA FORMAT  
FROM THE LIST]
    06 --> 07[07  
175121 = 17512]
    07 --> 08[08  
BEGIN DO LOOP  
200 N = 1, 11]
    08 --> 09[09  
K = N * 1000000000  
J = K - 1000000000]
    09 --> 10[10  
WRITE TO DEV  
VIA FORMAT  
FROM THE LIST]
    10 --> 11[11  
LIST = N, 17511, 1001, J, 11]
    11 --> 12{12  
END OF DO  
LOOP?}
    12 -- NO --> 08
    12 -- YES --> 13[13  
**** PRINT K(1000000000),  
J(11), AND  
T(11) ****]
    13 --> 14[14  
WRITE TO DEV  
VIA FORMAT  
FROM THE LIST]
    14 --> 01

    15[15  
LIST = 17511, 1001, J, 11] --> 16[16  
BEGIN DO LOOP  
200 N = 1, 10]
    16 --> 17[17  
K = N * 1000000000  
J = K - 1000000000]
    17 --> 18[18  
WRITE TO DEV  
VIA FORMAT  
FROM THE LIST]
    18 --> 19[19  
LIST = N, 1751, 1001, J, 11]
    19 --> 20{20  
END OF DO  
LOOP?}
    20 -- NO --> 16
    20 -- YES --> 21[21  
***TEST FOR SHEET  
GEOMETRY POINT***]
    21 --> 22{22  
DVP?}
    22 -- 0 --> 23[23  
END]
    22 -- 1 --> 24[24  
END]
    24 --> 25{25  
ELI?}
    25 -- 0 --> 26[26  
END]
    25 -- 1 --> 27[27  
WRITE TO DEV  
VIA FORMAT  
FROM THE LIST]
    27 --> 28[28  
END]

```

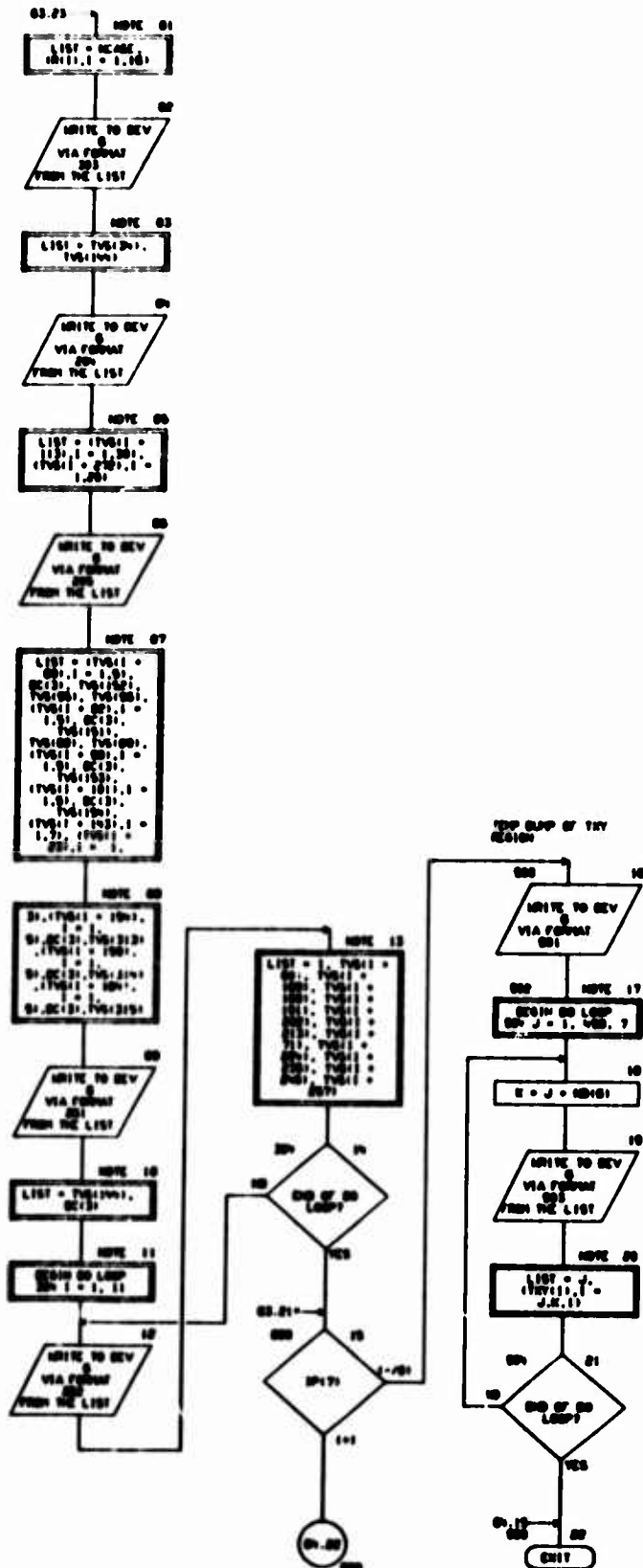


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6320)
COMMON /MISC/ MISC(100)
COMMON /IPRINT/ IP(100)
DIMENSION D(2000), CD(2000), MD(100), DC(100)
, TD(600), TS(600), TXY(500), R(10)
, TV(1400)
EQUIVALENCE (D(1),T(2001)), (CD(1),T(4121)), (MD(1),T(6121))
, (TD(1),CD(1101)), (TXY(1),T(801)), (TS(1),CD(11))
, (DC(1),D(1401)), (R(1),MISC(95))
, (MEAS,MD(80)), (MPAGE,MD(95))
, (TVS(1),CD(601)), (DPPV,D(2001)), (ELLIPDA,D(320))
201 FORMAT(1H1,91X,10H** PRTO - IP(6) **
, 14,4X,DA10 /17X,DA10)
202 FORMAT(1H0,7X,4H*** GEOMETRY DATA - HEIGHT ANALYSIS REFERENCE **
, 1)
203 FORMAT(1H0H ** PLATFORM GEOMETRY PARAMETERS---SHEEP- FS.2,
14H DEGREES AT FS.4, 0H C. **)
204 FORMAT(100H0 PANEL AREA AR T.R. T/C(1) T
/C(1) SIGMA C(1) C(TIP) SPAN/2 BL/DI /DH CROSS
F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH EXPOSE/F11.3,F10.4,W10.5
,F10.3,F0.3,F10.3,/DH STRUCT.F11.3,F10.4,W10.5,F10.3,F0.3,F10.3
,/DH PI/ARCH/F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH PISTRCH/F11.3,
F10.4,W10.5,F10.3,F0.3,F10.3)
2040 FORMAT(10H CL-V1 F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH CL-V11
F11.3,F10.4,W10.5,F10.3,F0.3,F10.3,/DH V1-V11 F11.3,F10.4,W10.5
,F10.3,F0.3,F10.3,/DH V11-D/FF11.3,F10.4,W10.5,F10.3,F0.3,F10.3
)
205 FORMAT(100H0 ** PLATFORM EQUATIONS AND COORDINATES **
/107H0 ITEM LE FS
EA BS TE FS(1) .05 C AERO C SYN
UC. C/DH TAN W11.6,/DH CND W11.3,/DH SIN W11.6,/DH
COS W11.6,/DH ANGLE W11.3,/DH EDI K/C,11X,W11.6,/DH X-D1/2 ,7
F11.3,/DH X-PIVOT,W11.3,/DH X-D/2 ,W11.3)
206 FORMAT(14H0H ** T/C, LE, TE CONTROL POINTS. ** //100H POINT
(1) (2) (3) (4) (5) (6) (7)
(8) (9) (10) (11) )
207 FORMAT(10H Y10 P.1 11F0.2,/DH T/C 11F0.4,/DH SWAN 11F0.3, //
DH VILE: 11F0.2,/DH XILE: 11F0.2, / DH VITE: 11F0.2,/DH XITE:
11F0.2)
201 FORMAT(10H0H *** STRUCTURAL SYSTEM GEOMETRY DATA -- REF SHEEP-
FS.2,14H DEGREES AT FS.3, 7H C. **/,100H0POINT YEA(A) YISTRUC(
V1/VO C1AERO) SWAN T/C XEA(A) Y1/VS X1/VS:
Y1(8) X1(8))
202 FORMAT(14,F11.3,F10.3,F0.3,F0.3,F0.3,F0.3,F0.3,F0.3)
204 FORMAT(100H0POINT YISTRUC: WIDTH D(10) D(15) D(18)
X(10) X(18) PAN D D(10) J(10) J(10))
200 FORMAT(14,F11.3,F10.3,F0.3,F10.3,F10.4,F10.3,F0.3)
2000 FORMAT(10H,11H0K K(1C)=,1F0.4, 10H, D(11)=, 1F0.3, 1F10.3 )
207 FORMAT(100H0 PANEL S1(10) S(10) S(10) S(10) S(10) S(10) S(10) S(10)
VOL(1) VOL(1) DELV(1) DELV(1) S S(10) S(10) S(10) S(10) S(10) S(10) S(10) S(10)
S,3F0.3,F10.4,3F0.4,3F0.3,F10.3,F10.4)
200 FORMAT(14,F11.3,3F0.3,F10.4,3F0.4,3F0.3,F10.3,F10.4)
303 FORMAT(1H0,7X,10H*** SHEEP POSITION GEOMETRY DATA **/,10H,14H0K
LTA SHEEP-FS.2,10H DEG. LE SHEEP-FS.2)
001 FORMAT(10H) ***** GENERAL GEOMETRY DATA -- TTY REGION *****
, 10H,10H*** PRTO - IP(7) **/10H TTY )
003 FORMAT(1H 14,7X10.7)

```

05/10/74

AUTOFLOW CHART SET - SHEP HING AND ENPLANAGE MODULE - PAGE 04

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****SUBROUTINE SCOP*****

SECURITY DATA PROCESSING FOR OUTPUT

.....

CHART TITLE - SUBROUTINE GCOMP

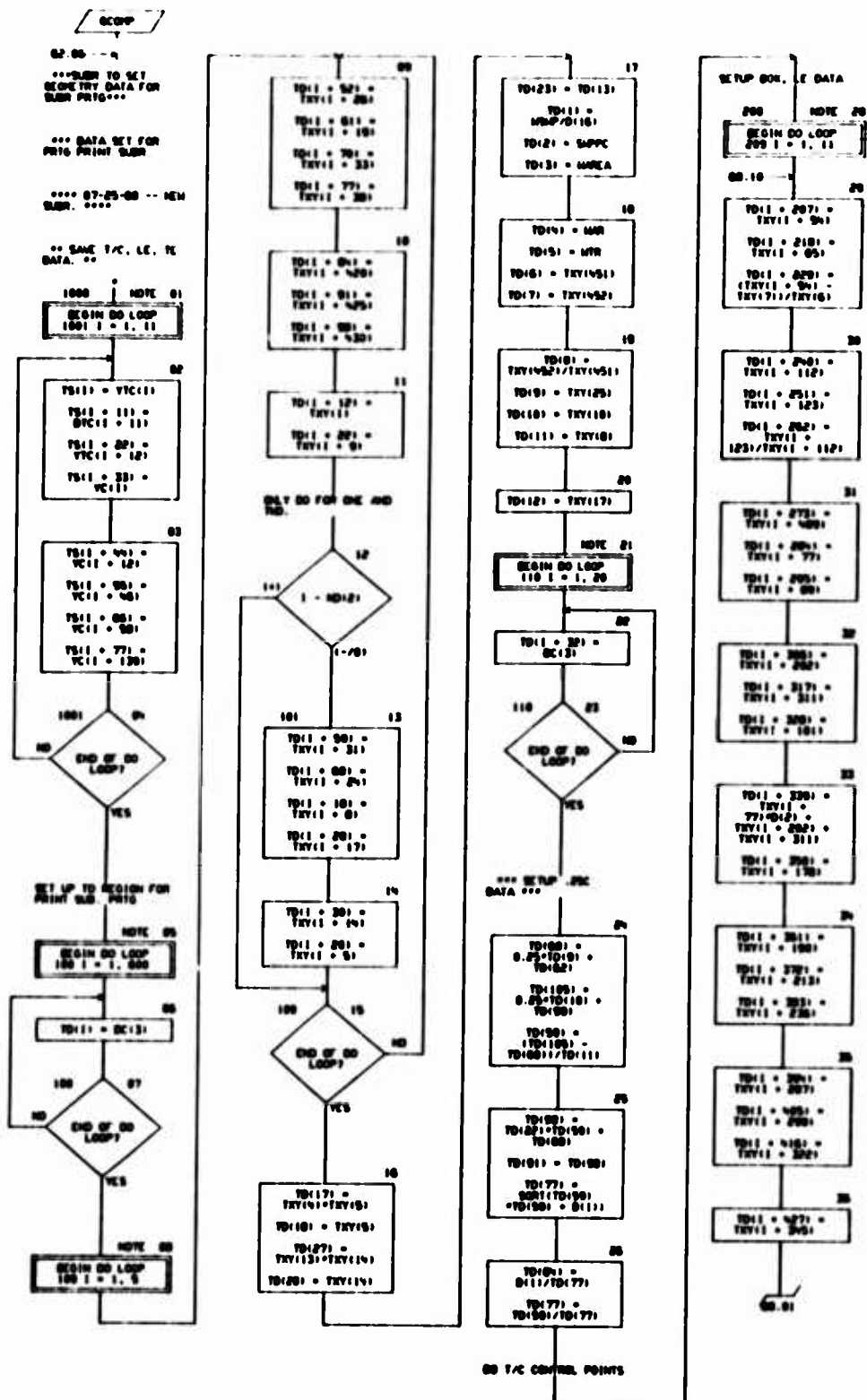


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COPPERN T161201
DIMENSION D120501, CD120001, MD11001, DC11001
, VTC1001, VC11501, DTC1221, TD10001, TS10001, TRV15001
, TVB14001
EQUIVALENCE (D111,T120011), (CD111,T141211), (MD111,T101211)
, (DC111,D114011), (DTC111,D120311)
, (VTC111,T12011), (VC111,T13011), (TRV111,T10011)
, (TS111,CD111), (TD111,CD11011)
, (TC10,D12431), (DTPVT,D12001), (DTPVT,D12011), (MAREA,D12401)
, (MWR,D12411), (MTR,D12411), (MSP,D12421), (MPPC,D11301)
, (MS10,D12451)
, (TVS111,CD10011)

```

OVERLAY (14,0)
LEADING AND TRAILING EDGE STRUCTURES,
WEIGHT AND MASS PROPERTIES ANALYSIS

**PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS**

Preceding page blank

PORTMAN PEARLE MINE AND EXPANSION POTENTIAL -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000071) 2 04 10 (000010) 2 03 (000010) 2 03
 (000070) 2 00 00 (000027) 2 07 (000027) 2 07

CHART TITLE - NEW PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - DISTRIBUTIVE MEET

(000041) 5 01 MEETE (000021) 2 04 11
 (000070) 5 01 100
 (000071) 5 02 (000072) 5 03
 (000070) 5 03 101
 (000074) 5 05 (000075) 5 06
 (000070) 5 06 102
 (000004) 5 00 300
 (000005) 5 00 (000007) 5 10
 (000007) 5 10 301
 (000000) 5 11 302
 (000004) 5 13 303
 (000100) 5 15 304
 (000105) 5 17 300
 (000140) 5 20 340 (000104) 5 16
 (000140) 5 21 (000151) 5 22
 (000151) 5 22 341
 (000100) 5 20 3410
 (000174) 5 30 (000170) 5 32
 (000170) 5 32 342
 (000101) 5 34 (000107) 0 03
 (000102) 5 35 343
 (000104) 0 01 344 (000101) 5 34
 (000107) 0 03 345 (000103) 5 35
 (000103) 0 00 (000203) 7 04
 (000104) 0 10 346
 (000105) 0 11 347
 (000100) 0 12 340 (000104) 0 10
 (000210) 7 01 342
 (000201) 7 02 340 (000104) 0 12
 (000203) 7 04 340 (000103) 0 00 (000200) 0 13 (000107) 0 14
 (000211) 7 07 (000215) 7 00
 (000215) 7 00 351
 (000210) 7 11 (000214) 7 14
 (000207) 7 12 353 (000210) 7 11
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 (000231) 7 21 355 (000231) 7 21
 (000234) 7 22 356 (000230) 0 03
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 (000230) 0 03 355 (000232) 0 00
 (000230) 0 00 356 (000232) 0 00
 (000201) 0 07 357 (000230) 7 20 (000235) 7 21 (000234) 0 02 (000231) 0 05 (000230) 0 00
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 (000277) 0 13 300
 (000270) 10 01 3000

CARD NO	PAGE-NO	NAME	REFERENCES	SOURCE	SEQUENCE NO	AND PAGE-NO
(000705)	10 03		(000700)	10 05		
(000706)	10 05	303				
(000707)	10 07	304				
(000708)	10 11		(000705)	11 15		
(000709)	10 12	305				
(000711)	10 14	306				
(000717)	10 16	307	(000710)	10 13		
(000718)	10 17	308				
(000719)	10 18	309				
(000720)	10 20	310	(000717)	10 16		
(000725)	10 22	311	(000718)	10 17		
(000727)	10 24	312	(000719)	10 18	(000721)	10 19
(000728)	11 01	313	(000720)	10 13	(000722)	11 02
(000729)	11 03	314	(000721)	10 17	(000723)	11 04
(000737)	11 05	315	(000722)	10 16		
(000738)	11 07	316	(000723)	10 21		
(000739)	11 15	317	(000724)	10 11	(000725)	10 27
(000740)	11 16	318	(000727)	0 13	(000726)	10 08

CHART TITLE - NEW PROCEDURAL STATEMENT.

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CONTROL

(000750)	15 01	000750	(000750)	5 07 II		
(000751)	15 01	102				
(000753)	15 05		(000752)	17 01		
(000757)	15 07	103				
(000758)	15 09	104	(000755)	15 05		
(000759)	15 10	105	(000757)	15 08		
(000761)	15 12	106				
(000763)	15 14	1001				
(000767)	15 15	1002				
(000770)	15 16	1003	(000765)	15 13	(000766)	15 14
(000771)	15 18		(000768)	15 20		
(000773)	15 20	107				
(000775)	15 24	108	(000772)	15 23		
(000776)	16 01	109	(000774)	15 23		
(000778)	16 05	110				
(000782)	17 01	110	(000777)	15 24		
(000787)	17 02	120				
(000788)	17 03		(000778)	17 04		
(000790)	17 04	121				
(000791)	17 05	122				
(000793)	17 06		(000789)	17 10		
(000795)	17 10	123				
(000796)	17 12		(000790)	17 14		
(000798)	17 14	124				
(000800)	17 16	125	(000792)	17 15		
(000802)	17 18	126	(000793)	17 17		
(000807)	18 01	130	(000794)	17 19		
(000808)	18 03	131	(000795)	18 02		
(000811)	18 04	132	(000796)	18 02		
(000819)	18 07	133	(000797)	18 05		
(000820)	18 01	134	(000798)	18 05		
(000827)	19 02	135				
(000828)	20 01	136	(000825)	19 01		
(000830)	20 02	140	(000826)	19 03	(000827)	19 05
(000831)	20 03		(000828)	20 11		
(000832)	20 05	141				
(000833)	20 07	142	(000829)	20 05		
(000834)	20 08	143				
(000835)	20 10	144	(000830)	20 08		
(000836)	20 11	145				
(000837)	20 13	146				
(000838)	20 14		(000831)	20 07		
(000839)	20 16	147	(000832)	20 15		
(000840)	20 20	148				
(000841)	20 21	149	(000833)	20 19		
(000842)	20 23	150	(000834)	20 22		

05-10-74	TABLE OF CONTENTS AND REFERENCES		AFTERLUM CHART SET - SHEEP		PAGE 3
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO AND PAGE/BOX	
(000507)	20 25	152			
(000508)	20 26	153	(000505)	20 24	
(000509)	20 27	154	(000505)	20 15	(000501) 20 27
(000510)	20 28	155			
(000511)	20 29		(000510)	20 30	
(000512)	20 30	161			
(000513)	21 01	172	(000510)	17 17	
(000514)	21 04	173	(000512)	21 03	
(000515)	21 05	173	(000512)	21 03	
(000516)	21 07	174			
(000517)	21 09	175	(000512)	21 05	
(000518)	21 10	175	(000514)	17 10	(000510) 21 05 (000517) 21 08
(000519)	21 11		(000519)	22 01	
(000520)	21 14	177			
(000521)	21 15	178	(000511)	21 13	
(000522)	21 17	177			
(000523)	21 18	178	(000519)	21 16	
(000524)	22 01	179			
(000525)	22 03	180			
(000526)	22 04		(000525)	22 16	
(000527)	22 05	181			
(000528)	22 06	182			
(000529)	22 10	183	(000525)	22 08	
(000530)	22 12	184	(000529)	22 11	
(000531)	22 14	185			
(000532)	22 15	185	(000531)	22 13	
(000533)	22 16	187	(000532)	22 05	(000529) 22 11
(000534)	22 17	188			
(000535)	22 18		(000535)	22 19	
(000536)	22 19	189			
(000537)	22 20	190	(000537)	17 15	(000530) 20 30
(000538)	22 21		(000538)	22 23	
(000539)	22 23	1900			
(000540)	22 25		(000540)	22 26	
(000541)	22 26	191			
(000542)	23 02	200			
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CHART TITLE - NEW PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE LEWT

(000757)	26 01	LEWT	(000809)	26 11-12
(000758)	26 01	189		
(000759)	26 02		(000759)	26 03
(000760)	26 03	191		
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(000762)	26 05	192		
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(000764)	26 06	193		
(000765)	27 02	1930		
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(000800)	27 04	1932	(000767)	27 01
(000801)	27 05		(000804)	27 07
(000802)	27 07	1933		
(000811)	27 08	1936		
(000815)	27 10	1937		
(000816)	27 11	1939	(000814)	27 09
(000820)	27 16	194	(000823)	27 15
(000825)	27 17	1940	(000825)	27 16
(000833)	28 01	1941	(000826)	27 16
(000835)	28 02	1942	(000830)	27 17
(000841)	28 04	195	(000823)	27 15
(000846)	28 05	195		

05-10-74	TABLE OF CONTENTS AND REFERENCES		AUTOFLEX CHART SET - SHEEP		PAGE 4
CHD ID	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO AND PAGE/BOX	
(000000)	20 07		(000070)	20 10	
(000071)	20 09 107				
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(000012)	20 38 118				
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(000005)	20 10 1230				
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(001013)	31 02 128		(001000)	20 16	
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(001046)	31 12 132				
(001049)	31 15 133				
(001050)	31 16		(001000)	31 20	
(001050)	31 20 134				
(001005)	31 23 134-0				
(001071)	31 25 135				
(001005)	32 04 136		(001040)	31 14	(001004) 31 02
(001000)	32 05 137				
(001000)	32 08 138		(001007)	32 06	
(001001)	32 09 139		(001000)	32 07	
(001100)	32 14 140				
(001102)	32 16 141		(001000)	32 13	
(001103)	32 17 142		(001101)	32 15	
(001107)	32 18 143				
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(001120)	32 22		(001120)	32 25	
(001122)	32 25 145				
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(001127)	32 31 1450				
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(001140)	33 05 157				
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(001104)	33 15 163				
(001105)	33 16 164		(001103)	33 14	

OBJ ID	PAGE NO	NAME	AUTOFLOW CHART SET - SWEEP			PAGE
			REFERENCES	SOURCE	SEQUENCE NO	
001105	33 17	165				
001107	33 18	166	001105		33 18	
001108	33 19	167				
001109	33 20	168	001107		33 18	
001173	33 22		001174		33 23	
001174	33 23	169				
001177	33 24	170				
001178	33 25	171				
001185	33 27		001187		33 30	
001187	33 30	175				
001188	33 33		001182		33 35	
001189	33 35	176				
001195	33 37	189	001177		33 24	

CHART TITLE - NON PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE TEST

001205	35 01	TEST	000000		5 13-1	
001235	35 01	188				
001237	35 02		001238		35 03	
001238	35 03	181				
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001243	35 06	182				
001247	35 07	183				
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001253	35 13		001255		35 14	
001255	35 14	1833				
001262	35 15	1835				
001265	35 17	9002				
001269	35 18	9005	001265		35 16	
001270	35 21	184	001273		35 20	
001279	35 22	1840	001276		35 21	001284 37 01
001284	37 01	1841	001276		35 21	
001288	37 02	1842	001282		35 22	
001290	37 04	1843				
001291	37 05	1844	001299		37 03	
001294	37 08	185	001273		35 20	
001300	37 08	186				
001301	37 09		001320		37 10	
001305	37 11	187				
001320	37 18	189	001304		37 18	
001332	37 22	218				
001334	37 24	211				
001335	37 25	212	001333		37 23	
001337	37 27	213				
001338	37 28	214	001335		37 25	
001340	37 30	215				
001341	37 31	216	001339		37 29	
001343	38 02	217				
001345	38 03	218	001342		38 01	
001351	38 05	219				
001362	38 07	220	001350		38 05	
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001366	38 11	222	001354		38 09	
001368	38 13	223				
001369	38 14	224	001358		38 12	
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001363	38 16	225				
001365	38 17	226	001362		38 15	
001370	38 18		001371		38 20	
001371	38 20	227				
001376	38 21	230				
001377	38 22	231				
001385	38 24		001387		38 27	
001387	38 27	235				

CHART NO.	TABLE OF CONTENTS AND REFERENCES	AUTOFLOW CHART SET	SHEET	PAGE
CARD NO.	PAGE NO.	NAME	REFERENCES (SOURCE, SERIAL NO. AND PAGE NO.)	
(001342)	30 30	(001394)	30 33	
(001394)	30 31 237			
(001399)	30 31	(001401)	30 39	
(001401)	30 39 239			
(001403)	30 40 240	(001376)	30 21	

CHART TITLE - NEW PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FLOW

(001414)	41 01 100V	(001719)	40 00 2
(001447)	41 02 112	(001444)	41 01
(001451)	41 04	(001450)	41 00
(001454)	41 05 1130		
(001458)	41 06 113	(001453)	41 05
(001466)	41 09 114	(001444)	41 01
(001469)	41 11	(001472)	41 12
(001472)	41 12 115		
(001476)	41 14 116		
(001480)	41 16 117		
(001483)	41 17 118	(001479)	41 15
(001484)	41 18	(001485)	41 19
(001485)	41 19 119		
(001488)	42 01 120	(001479)	41 15
(001492)	42 03 1200		
(001495)	42 04 121	(001487)	41 19
(001497)	42 06	(001501)	42 00
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(001532)	43 05 129		
(001542)	43 06 130	(001530)	43 03
(001548)	43 13 131	(001546)	43 12
(001553)	43 15 1310		
(001554)	43 17 132	(001556)	43 16
(001563)	44 01 133	(001556)	43 16
(001566)	44 02 134	(001561)	43 00
(001568)	44 04 135	(001560)	43 17
(001569)	44 05 136		
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(001597)	44 20 143		
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(001605)	44 25 147	(001582)	44 15
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(001616)	44 30 149	(001582)	43 14
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(001621)	44 35 153	(001615)	44 29
(001623)	44 37 154		
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(001627)	45 01 156	(001620)	44 34
(001641)	45 05	(001634)	45 12
(001648)	45 09 157		

CHART ID	PAGE NO.	NAME	DEFINITION	CHART TYPE	NO.	NO.	NO.
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CHART TITLE - RUN PARAMETERS STATEMENTS

CHART TITLE - INTERIMINARY COMMENTS

CHART TITLE - SEQUENTIAL TIME

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0010724	49	14	162				
0010717	49	16	1620				
0010730	49	17	1621	0010731	49	15	
0010731	49	20	161				
0010744	49	21	164	0010752	49	19	
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0010970	53	25	180	0010975	53	22	
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0010995	53	34	194	0010991	53	11	
0010997	53	35	195	0010995	53	13	
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0020007	54	04	1970				
0020000	54	05	1971	0020005	54	03	
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0020015	54	10	199	0020012	54	07	
0020010	54	11	200	0020014	54	09	
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CARD ID	PAGE NO.	NAME	REFERENCES (SOURCE SEQUENCE NO AND PAGE NO)
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(002058)	24	33	230
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(002063)	24	39	231
(002066)	24	42	(002068) 24 45
(002068)	24	45	232
(002071)	24	46	209
(002073)	24	47	209

CHART TITLE - NON PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SURVIVANT LISTS

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				(002256)	58	23
				(002258)	58	15

05/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP				PAGE	9
CARD NO	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO	AND PAGE/BOX		
(002276)	00 07		(002320)	01 20				
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(002305)	01 04 163							
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(002480)	05 14 003							

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP	
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO AND PAGE/BOX
(002403)	05 16		(002404)	05 17	
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(002497)	06 01 226		(002490)	05 21	
(002500)	06 02 227		(002490)	05 21	(002494) 05 22
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CHART TITLE - NON PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE C101

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(002591)	71 03 101										
(002594)	71 04 110										
(002595)	71 05 111	(002587)	71 07								
(002596)	71 06 112										
(002598)	71 08 113	(002595)	71 05								
(002611)	71 09 120										
(002612)	72 01 121	(002614)	72 03								
(002613)	72 02 122										
(002615)	72 04 123	(002612)	72 01								
(002618)	72 05 130										
(002623)	72 06 131										
(002624)	72 07 132	(002626)	72 09								
(002625)	72 08 133										
(002627)	72 10 134	(002624)	72 07								
(002631)	72 11 135										
(002632)	72 12 137										
(002633)	72 13 138										
(002634)	72 14	(002636)	72 15								
(002636)	72 15 139										
(002639)	72 16 140	(002632)	72 12								
(002641)	72 18	(002644)	72 19								
(002644)	72 19 141										
(002648)	72 21 142	(002646)	72 20								
(002650)	72 23 143										
(002651)	72 24 144										
(002653)	72 25 1440	(002650)	72 23								

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP			
CARD ID	PAGE NO.	NAME	REFERENCES (SOURCE SEQUENCE NO AND PAGE NO.)				
1007054	72 26	144	1007052	72 24			
1007055	72 27	145	1007049	72 22	1007050	72 23	
1007057	72 29	146					
1007058	72 30	147					
1007060	73 01	148	1007056	72 28	1007057	72 29	
1007063	73 02	150					
1007064	73 03	151	1007075	73 12			
1007066	73 05	152					
1007067	73 06	153					
1007068	73 07	1530	1007066	73 05			
1007070	73 08	1531	1007068	73 06			
1007071	73 09	154	1007065	73 04	1007066	73 05	
1007073	73 11	155					
1007074	73 12	156					
1007076	73 13	157	1007072	73 10	1007073	73 11	
1007078	73 14	160	1007037	72 15			
1007085	73 15	170	1007031	72 11			
1007088	73 16	171					
1007091	73 19		1007095	73 22			
1007095	73 22	8040					
1007098	73 23	190	1007095	73 19			

CHART TITLE - NEW PROCEDURAL STATEMENTS

05/10/74

TABLE OF DIAGNOSTICS

AUTOFLOW CHART SET - SHEEP

PAGE 1

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOOK	
10000171	2 02	UNRECOGNIZED SYNTAX
10000275	2 05	UNRECOGNIZED SYNTAX
10000273	9 11	UNDEFINED - WITHIN EXTERNAL REFERENCE
10000274	9 12	UNDEFINED - WITHIN EXTERNAL REFERENCE

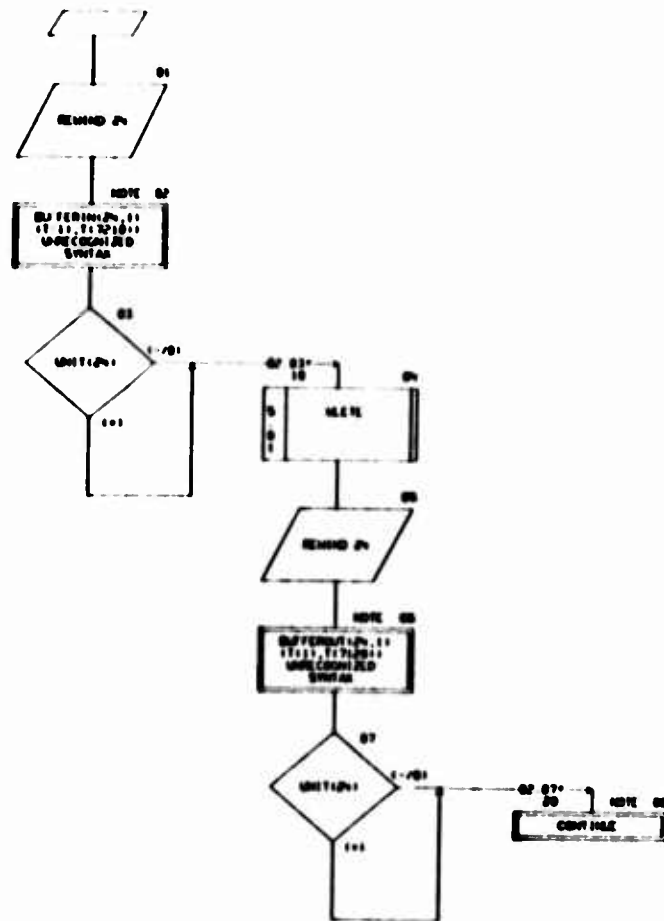
PROGRAM FLOW CHARTS

Preceding page blank

CHART TITLE - INTERLUATORY COMMENTS

*****PROGRAM CLARIN*****
PROGRAM FOR SECOND SECOND OVERLAY OF HING/EXTENSION MODULE
LEADING AND TRAILING STRIKE PLATES - HEIGHT AND PAGES PROPERTIES

CHART TITLE - PROCEDURES



00-10-74

AUTOLON COURT 01 - SUEP - WING AND EPOHWAU PLATE - PAGE 01

COURT TITLE - NEW PROCEEDING STATEMENTS

PROGRAM 01.014

COURT 117120

COURT 117120 / 117120

05/10/74

AUTORELON CHART SET - SHEEP WING AND EXTENSIBLE WINDLIE - PAGE 04

CHART FILE - INTRODUCTION COMMENTS

*****ILLUSTRATION HERE*****

LEADING EDGE - TRAILING EDGE HEIGHT ESTIMATION CONTROL

[illegible]

CHART TITLE SUBROUTINE NAME

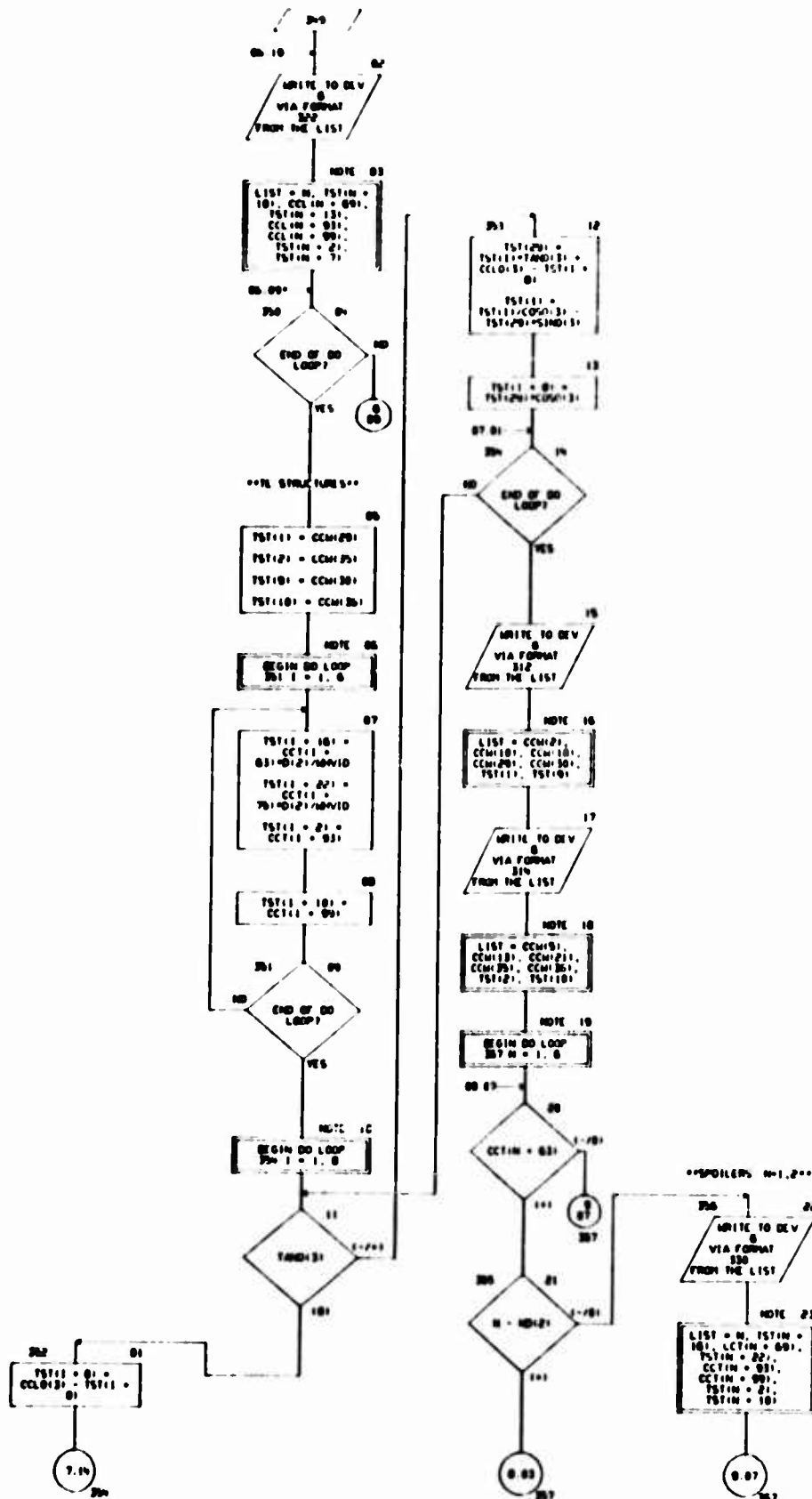


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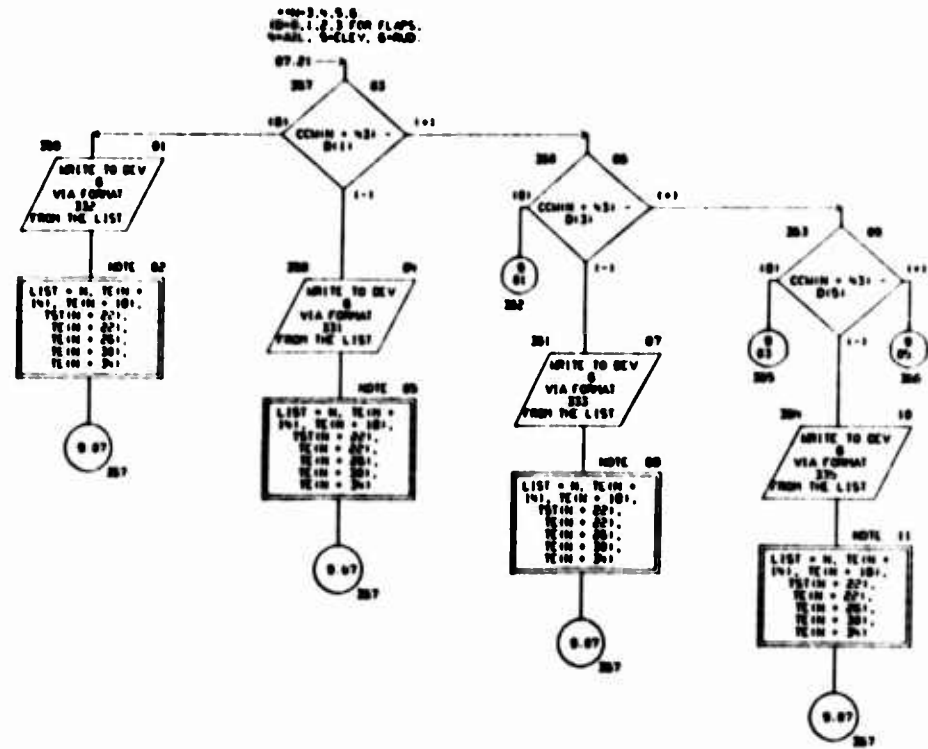


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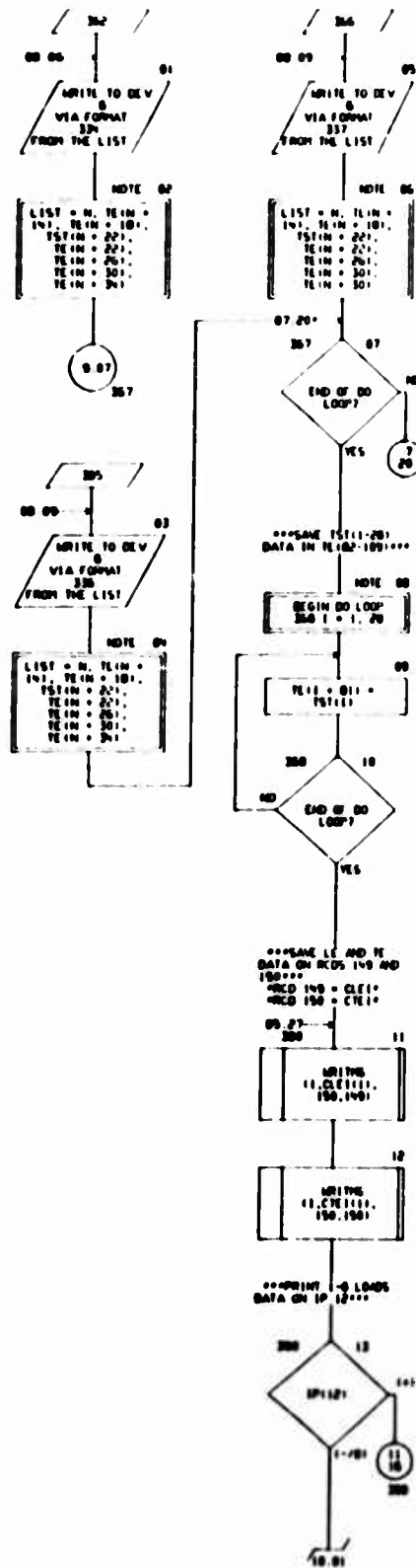


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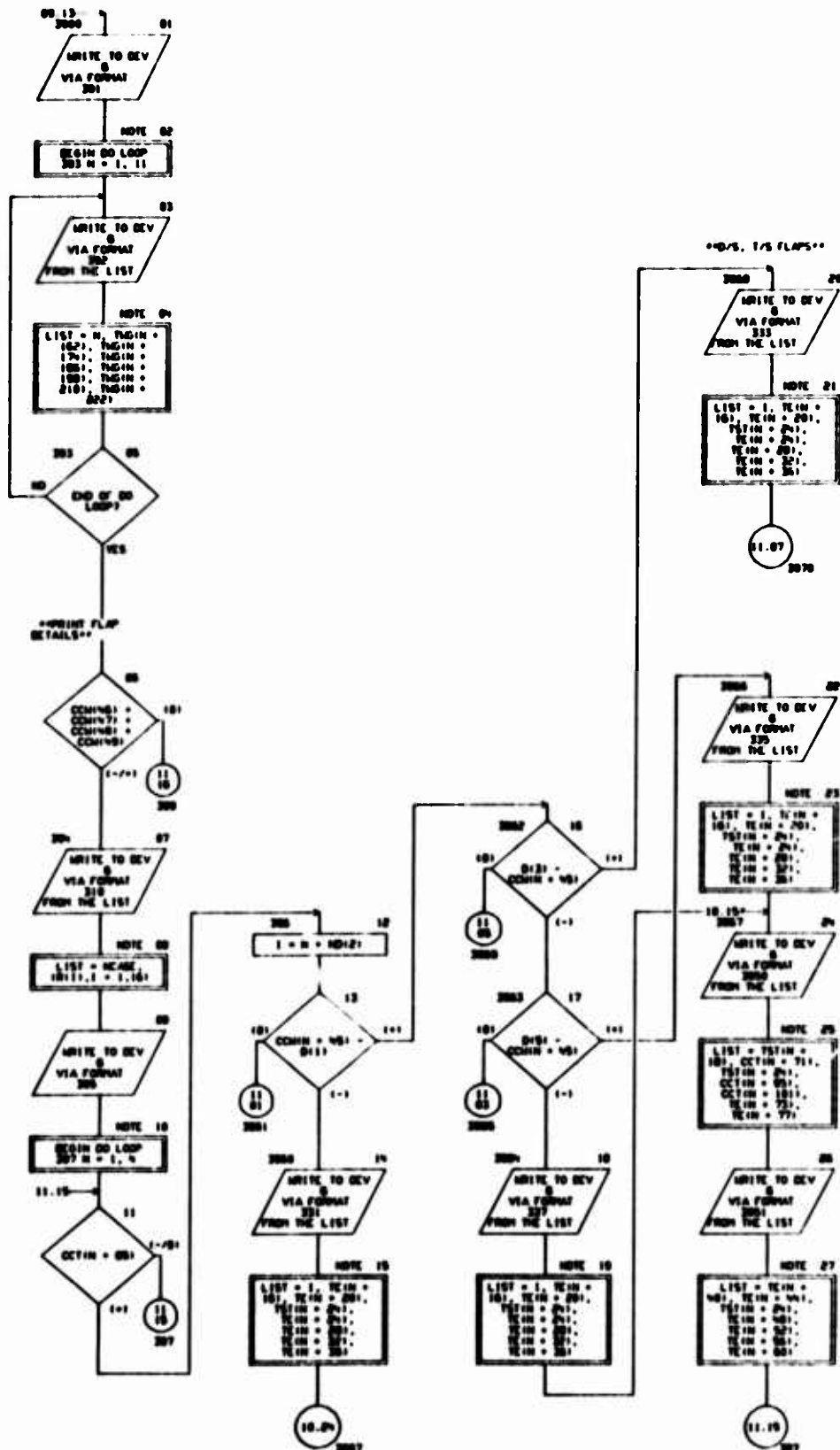


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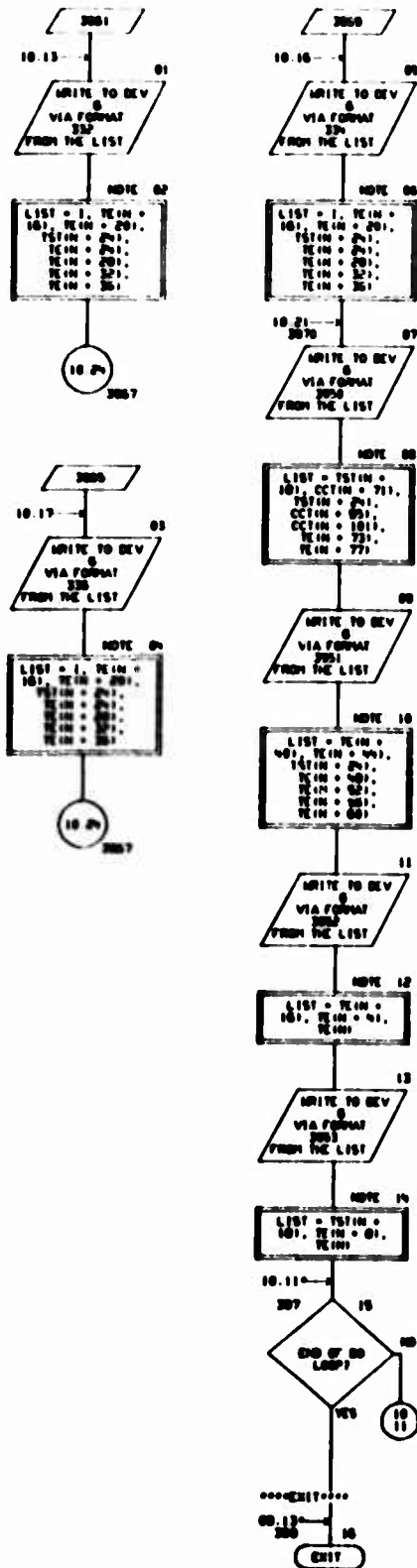


CHART TITLE - NON PROCEDURAL STATEMENTS

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COPEN /PRINT/ IP(00)
COPEN /HISC/ HISC(100)
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TBA(100),WTD(100),CCL(100),CCT(100),
TC(100),TXY(100),TXYD(100),
TE(100),H(10),
TAND(0),CCLD(0),SIND(0),COSD(0),
CCL(100),CCLD(0),TND(100),TS(100),
C10V(100),
CLE(100),CTE(100)
EQUIVALENCE (0(1),T(200(1)),CD(1),T(12(1)),ND(1),T(6(1)),
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(TC(1),T(20(1)),TXY(1),T(8(1)),TXYD(1),T(50(1)),
(TAND(1),T(12(1)),CCLD(1),T(13(1)),SIND(1),T(14(1)),
(COSD(1),T(14(1)),CCTEA(1),T(15(1)),TND(1),T(130(1)),
(CCT(1),CD(10(1)),H(1),CD(1),TST(1),T(170(1)),
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(CCT(1),CD(10(1)),CLE(1),CD(5(1)),CTE(1),CD(10(1)))
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      10H,DA10/10H,DA10)
311 FORMAT (10H) ***LEADING EDGE AND TRAILING EDGE STRUCTURE M
      EIGHT AND DISTRIBUTION SUMMARYS**** //10H
      M-LB/MW M/S-LB/WF AREA-W/MV YC(10P) H(10P) TC
      0(10) H(10P) //10H ***TOTAL L. EDGE STRUCTURES***,F10.2,F10.3,F
      12.3,W10.2)
312 FORMAT (10H) ***TOTAL T. EDGE STRUCTURES***,F10.2,F10.3,F12.3,W10
      .2)
313 FORMAT (10H) **FINED LEADING EDGE***,F10.2,F10.3,F12.3,W10
      .2)
314 FORMAT (10H) **FINED TRAILING EDGE***,F10.2,F10.3,F12.3,W10
      .2)
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      ,W10.2)
316 FORMAT (10H) **LE DEV,12,10H. FLAPETS***,F10.2,F10.3,F12.3
      ,W10.2)
317 FORMAT (10H) **LE DEV,12,10H. FROPP LE***,F10.2,F10.3,F12.3
      ,W10.2)
318 FORMAT (10H) **TE DEV,12,10H. SPOILERS***,F10.2,F10.3,F12.3
      ,W10.2)
319 FORMAT (10H) **TE DEV,12,10H. P. FLAPS***,F10.2,F10.3,F12.3
      ,W10.2)
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321 FORMAT (10H) **TE DEV,12,10H. P-S FLAPS***,F10.2,F10.3,F12.3
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323 FORMAT (10H) **TE DEV,12,10H. T-S FLAPS***,F10.2,F10.3,F12.3
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324 FORMAT (10H) **TE DEV,12,10H. T-S FLAPS***,F10.2,F10.3,F12.3
      ,W10.2)
325 FORMAT (10H) **TE DEV,12,10H. ALLETS***,F10.2,F10.3,F12.3
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326 FORMAT (10H) **TE DEV,12,10H. ELEVATORS***,F10.2,F10.3,F12.3
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327 FORMAT (10H) **TE DEV,12,10H. FLIDERS***,F10.2,F10.3,F12.3
      ,W10.2)
328 FORMAT (10H) ****-S L.E. AND T.E. LOADS SUMMARY***
      *,10H) **L.E. STRUCTURES** **T.E. STRUCT
      URES**//10H STA DEAR 0-HEN T-HEN DEAR 0
      -HEN T-HEN )
329 FORMAT (10H) IN,12,F10.1,F12.1,F11.1,F12.1,F11.1)
330 FORMAT (10H) ***TRAILING EDGE SERVICE COMPONENT SUMMARY***
      //10H
      M-LB/MW M/S-LB/WF ARE

```

08/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPLOYMENT NEEDS - PAGE 13

CHART TITLE - HIGH-PROCEDURAL STATEMENTS

	A-W / AN	VEG(EP)	REG(PS)	VEG(ST)	REG(ST)	
3000	FORMAT 12M			PANELS	/	.F10 2.F10 3.F12 3.W10
						3)
3001	FORMAT 12M			PLACEMENTS	/	.F10 2.F10 3.F12 3.W10
						3.7)
3002	FORMAT 12M			REV AREA TOTAL	*	.F10 2.F10 3.F12 3)
3003	FORMAT 12M			-PANEL		.F10 2.F10 3.F12 3.7)

05/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPERORGE MODEL - PAGE 14

CHART TITLE - INTRODUCTORY COMMENTS

*****PRELIMINARY SCEN*****

TABLE - CH. LE. RE GEOMETRY DATA SETUP FOR ST ANALYSIS

CHART TITLE - SUBROUTINE GCHNL

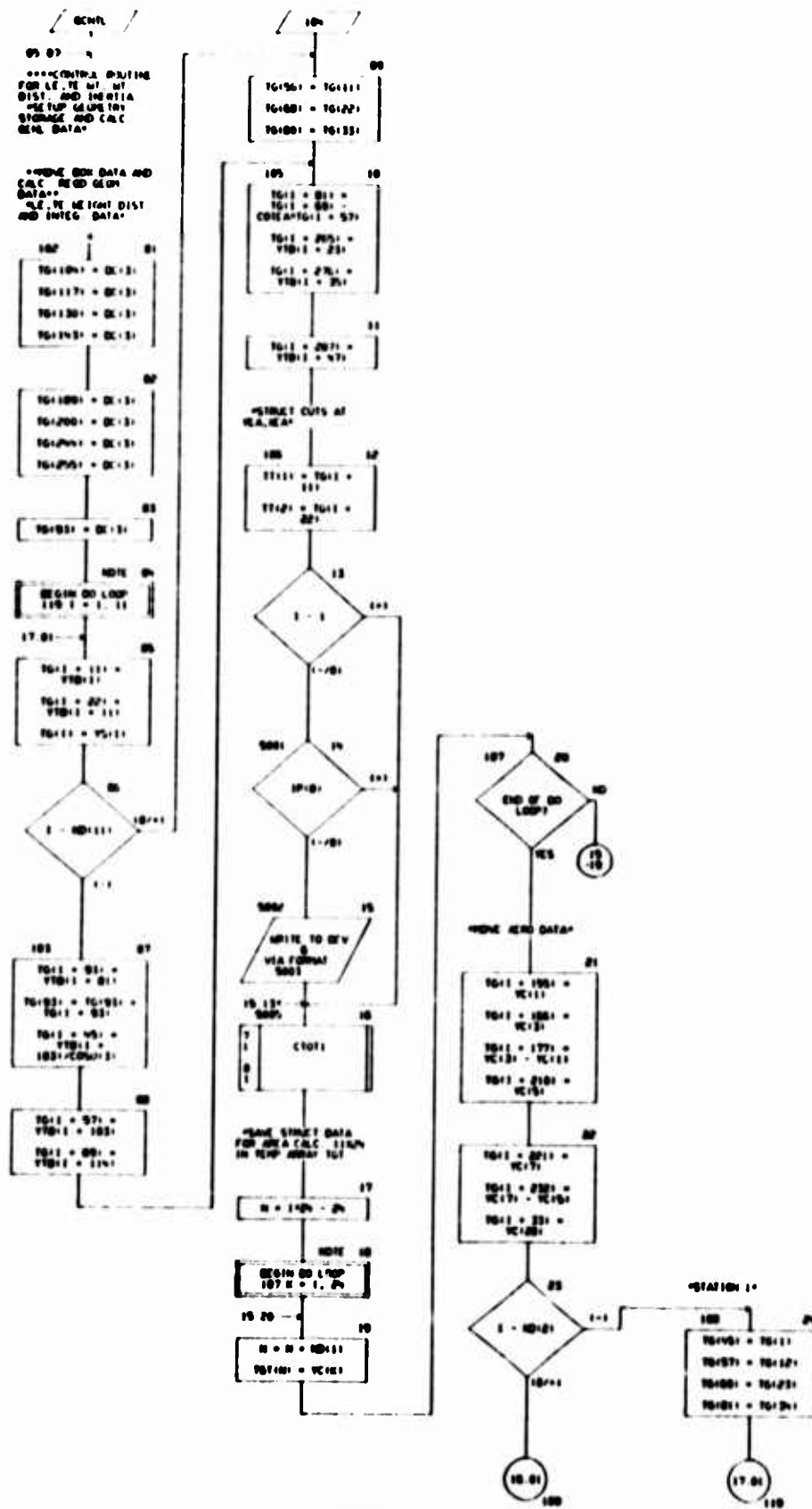
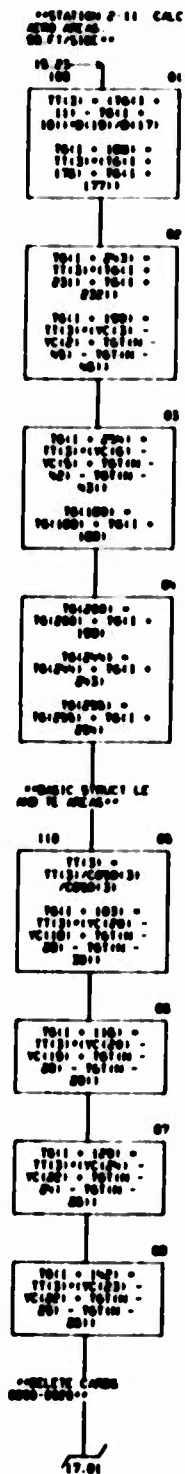
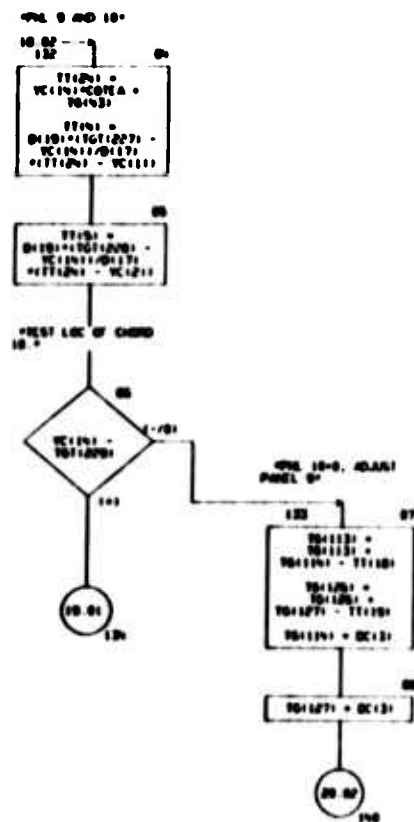
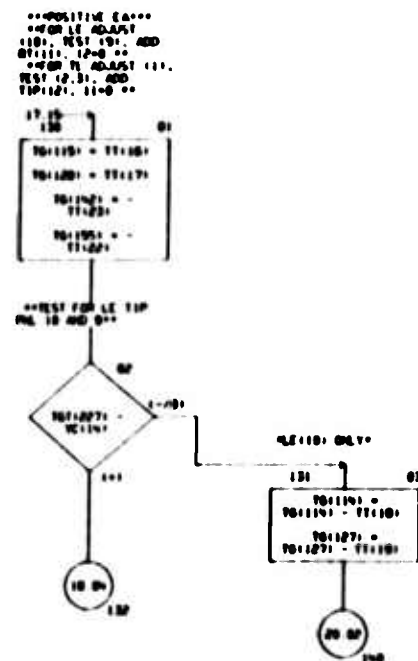


CHART TITLE - SUBROUTINE GENFL



COURT TITLE - SUBMITTING GENR



05/10/74

AUTOTON CHART SET - SHEEP WING AND EMPLOYMENT MODULE - PAGE 19

CHART TITLE - SUBROUTINE GENL



CHART TITLE - SUBROUTINE SCNTL

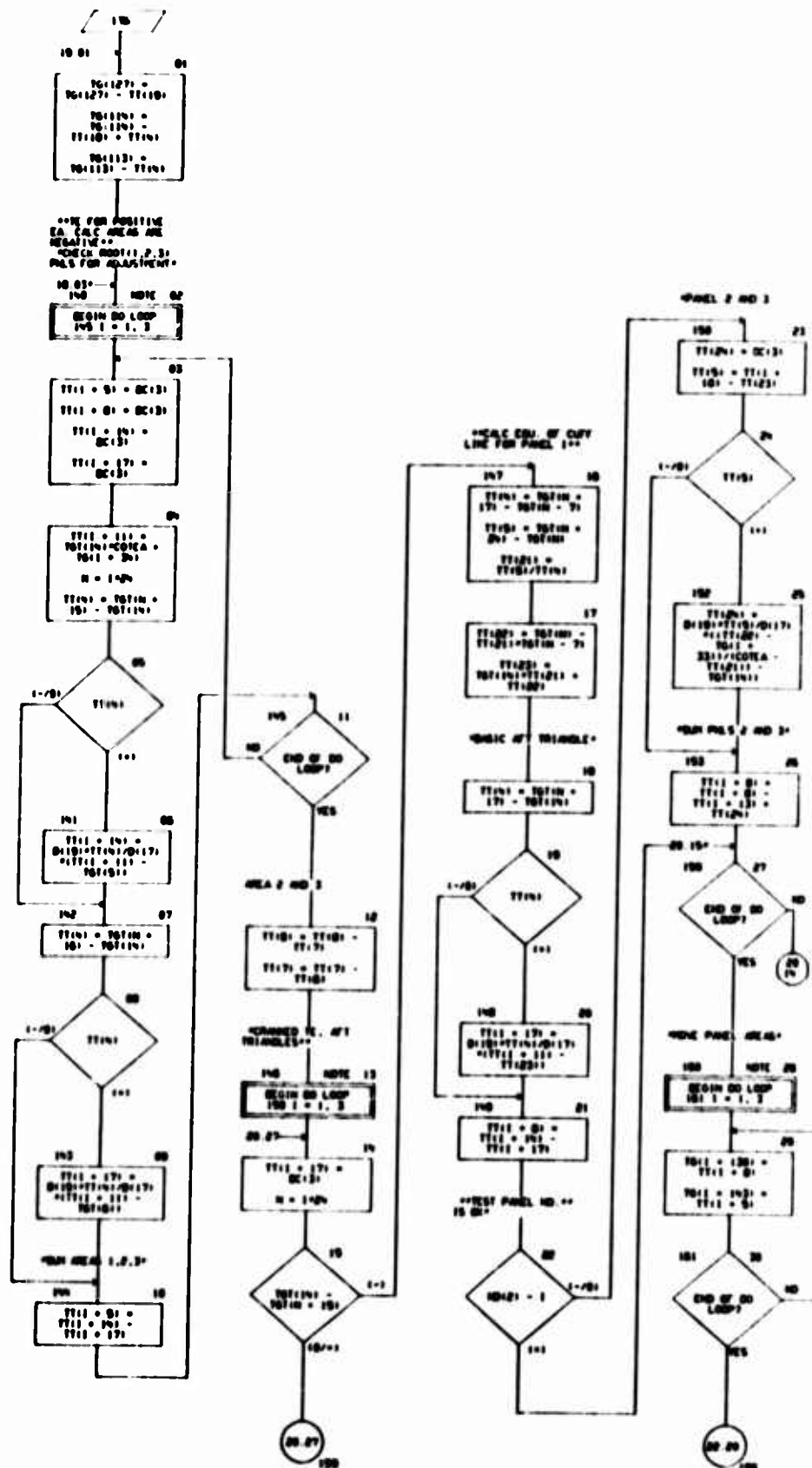
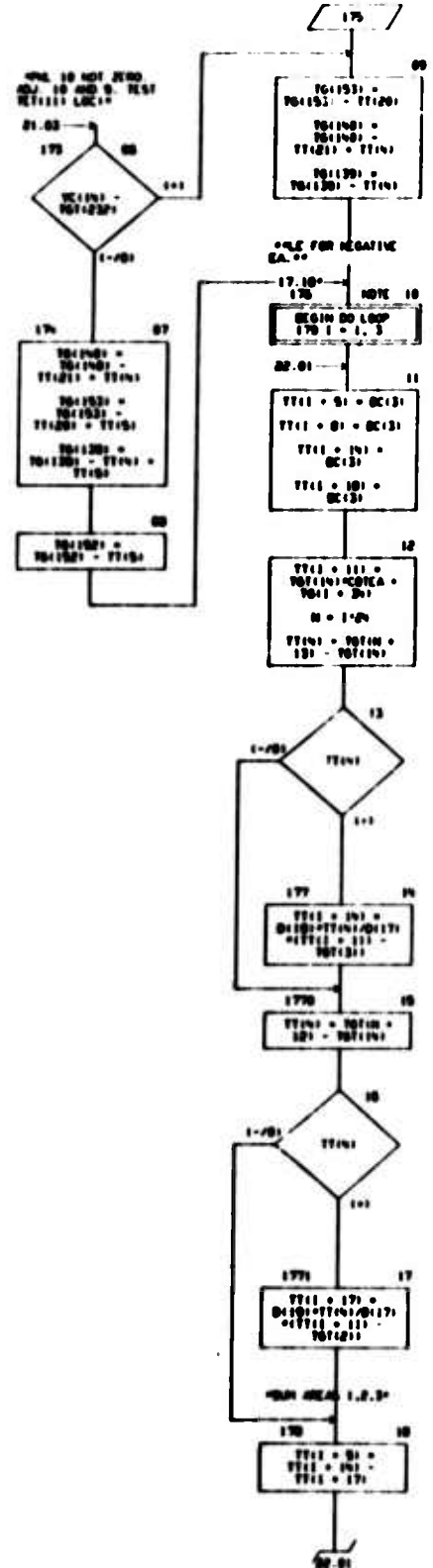
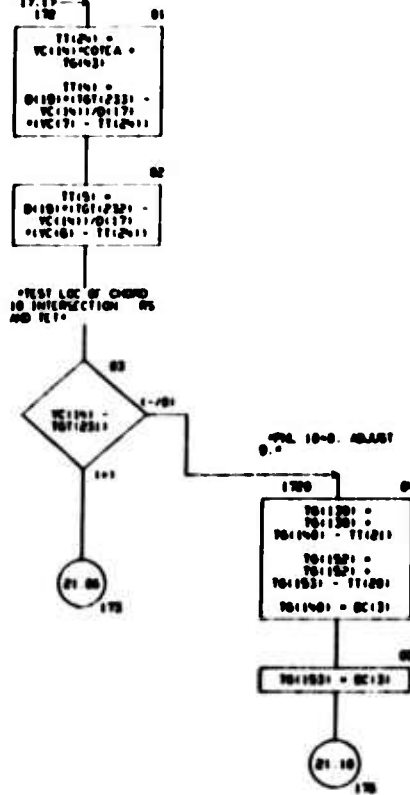


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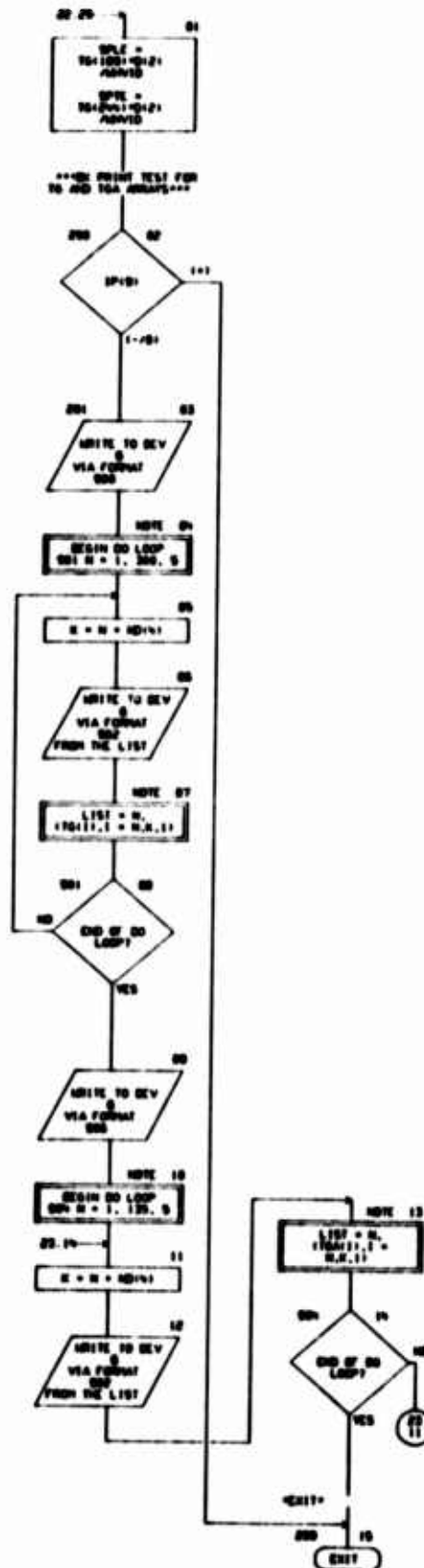
PHS 9.10 CALC
CHORD TO INTERSECTION
WITH VEA(11)



```

graph TD
    01{01 01  
END OF DO  
LOOP?} -- YES --> 02[02  
TT(1) = TT(1) -  
TT(2)  
TT(2) = TT(2) -  
TT(1)]
    01 -- NO --> 11((11))
    02 --> 03[03  
BEGIN DO LOOP  
N = 1, 2]
    03 --> 04{04  
END OF DO  
LOOP?}
    04 -- YES --> 107((107))
    04 -- NO --> 108[108  
TT(1) = TT(1) -  
TT(2)  
TT(2) = TT(2) -  
TT(1)]
    108 --> 109{109  
END OF DO  
LOOP?}
    109 -- YES --> 110[110  
TT(1) = TT(1) -  
TT(2)  
TT(2) = TT(2) -  
TT(1)]
    109 -- NO --> 111[111  
END OF DO  
LOOP?]
    111 -- YES --> 171[171  
TT(1) = TT(1) -  
TT(2)  
TT(2) = TT(2) -  
TT(1)]
    111 -- NO --> 172[172  
END OF DO  
LOOP?]
    172 -- YES --> 173[173  
TT(1) = TT(1) -  
TT(2)  
TT(2) = TT(2) -  
TT(1)]
    172 -- NO --> 174[174  
END OF DO  
LOOP?]
    174 -- YES --> 270[270  
END OF DO  
LOOP?]
    174 -- NO --> 175[175  
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LOOP?]
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CHART TITLE - SUBROUTINE 0004



1262

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
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VS(11),TV(124),TKV(1500),
TG(1300),TGT(1400),VC(150),TT(24),TGA(135),
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EQUIVALENCE (01),T(2051),ICD(1),T(4121),IND(1),T(6121),
(BC(1),D(1401),TKV(1),T(501),VS(1),TKV(1401),
(TV(1),TKV(151),T(611),T(1001),TGT(1),T(1301),TT(1),T(411),
(VC(1),T(201),ICD(1),T(152),TAND(1),T(122),COL(1),T(131),
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(002,T(121),05102,T(15)),
ND(10),T(571),05101,T(251),05101,T(251),
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000 FORMAT(130H1 **SCHTL SUBR. TG AND TGA ARRAYS**,$X,
10H** SCHTL - IP(0) **,//0H TG )
002 FORMAT(1H1,4,0E10,0)
005 FORMAT(0H0 TGA )

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CHART TITLE - INTRODUCTORY COMMENTS

*****ROUTINE LEFT*****

LE HEIGHT AND DISTRIBUTION EVALUATION

CHART TITLE - SUBROUTINE LEW

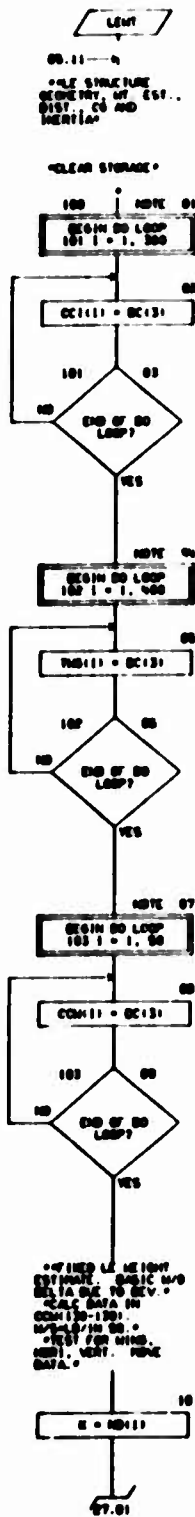
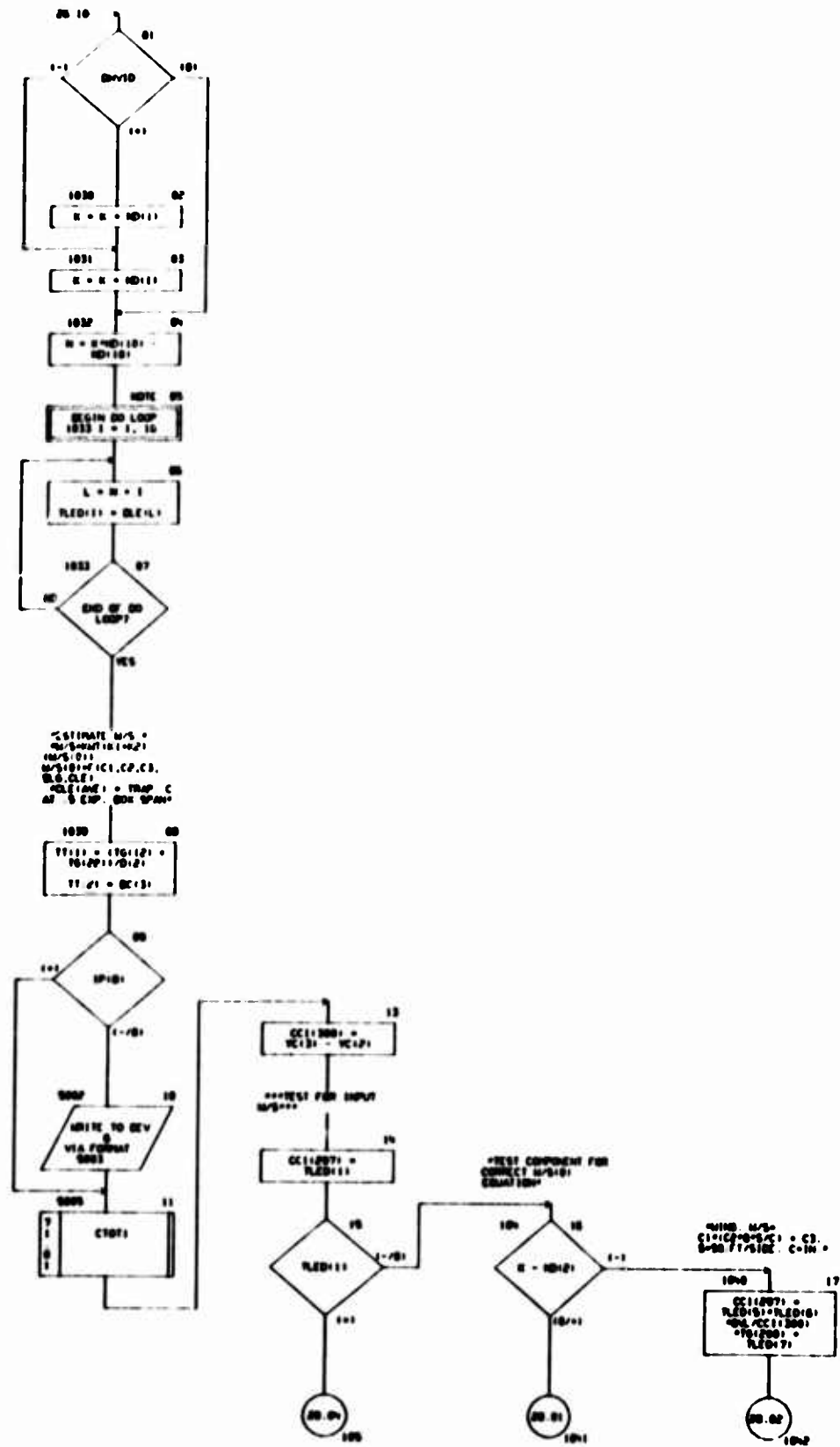


CHART TITLE - SUBROUTINE LEW



[illegible]

```

    graph TD
      20((20 100)) --> 01[PSI(1) = 421 +  
VC(1) * 0.001 + 0]
      01 --> 20
      20 --> 02[PSI(1) = 421 +  
VC(1) * PSI(1) + 0]
      02 --> 20
      20 --> 03[PSI(1) = 101 +  
VC(1) - VC(1)]
      03 --> 20
      20 --> 04{END OF DO  
LOOP?}
      04 -- YES --> 20
      04 -- NO --> 05((20 20))

      20 --> 04[PSI(37) =  
PSI(2) - PSI(1)]
      04 --> 05[PSI(9) =  
0.01 * PSI(37) +  
PSI(9) * PSI(1) +  
PSI(9)]
      05 --> 06[PSI(11) =  
PSI(10) +  
PSI(7) / PSI(37)]
      06 --> 07[PSI(12) =  
PSI(7) +  
PSI(11) * PSI(11)]
      07 --> 08[CC(10) = 123 +  
PSI(11) * CC(10) +  
123]
      08 --> 09[CC(10) = 123 +  
PSI(10) +  
PSI(5) / PSI(37)]
      09 --> 10[CC(10) = 141 +  
PSI(11) -  
PSI(11) * CC(10) +  
123]
      10 --> 11[CC(10) = 100 +  
CC(10) + 123]
      11 --> 12[CC(10) = 201 +  
CC(10) + 123]
      12 --> 13[CC(10) = 207 +  
PSI(10) / PSI(37) +  
PSI(10) + 123]
      13 --> 14[CC(10) = 213 +  
PSI(10) +  
PSI(11) * CC(10) +  
207]
      14 --> 15[PSI(9) = PSI(10) -  
PSI(5)]
      15 --> 16[PSI(43) =  
PSI(43) - PSI(13) +  
PSI(43) +  
PSI(43) * PSI(14) +  
PSI(10) +  
0.001 * PSI(37) +  
PSI(37) +  
PSI(4) * PSI(1)]
      16 --> 17[PSI(43) =  
PSI(43) - PSI(13) +  
PSI(43) +  
PSI(43) * PSI(14) +  
PSI(10) +  
0.001 * PSI(37) +  
PSI(37) +  
PSI(4) * PSI(1)]
      17 --> 18[PSI(43) =  
PSI(43) - PSI(13) +  
PSI(43) +  
PSI(43) * PSI(14) +  
PSI(10) +  
0.001 * PSI(37) +  
PSI(37) +  
PSI(4) * PSI(1)]
      18 --> 19[PSI(43) =  
PSI(43) - PSI(13) +  
PSI(43) +  
PSI(43) * PSI(14) +  
PSI(10) +  
0.001 * PSI(37) +  
PSI(37) +  
PSI(4) * PSI(1)]
      19 --> 20
  
```

```

01
  PSY(1) =
  RLED=121
  PSY(1) = 10111
  PSY(2) =
  PSY(3)=10111
  Q=3=PSY(2)
  PSY(1) =
  PSY(1)=PSY(1) +
  PSY(1)

02
  PSY(1) =
  PSY(1)=PSY(1) +
  PSY(1)
  PSY(1) = PSY(1) -
  PSY(1)=PSY(1)
  PSY(1) = PSY(1) -
  PSY(1)=PSY(1)

*FORM AND CCL FOR
*ELTA LE 011 + LINE*

03
  PSY(1) =
  PSY(1)=
  PSY(1)=PSY(1)
  PSY(1) =
  PSY(1)=
  PSY(1)=PSY(1)

*END DEVICE SEGMENT
*AND PSY = 3
*SEGMENTS*

121
  N = PSY(1)

NOTE 05
  BEGIN DO LOOP
  120 1 = 1. 0. 1

01 05 -
  PSY(1) = 231
  PSY(1) = 201
  PSY(1) =
  PSY(1) = 271
  PSY(1) =
  231=PSY(1) +
  PSY(1)
  PSY(1) =

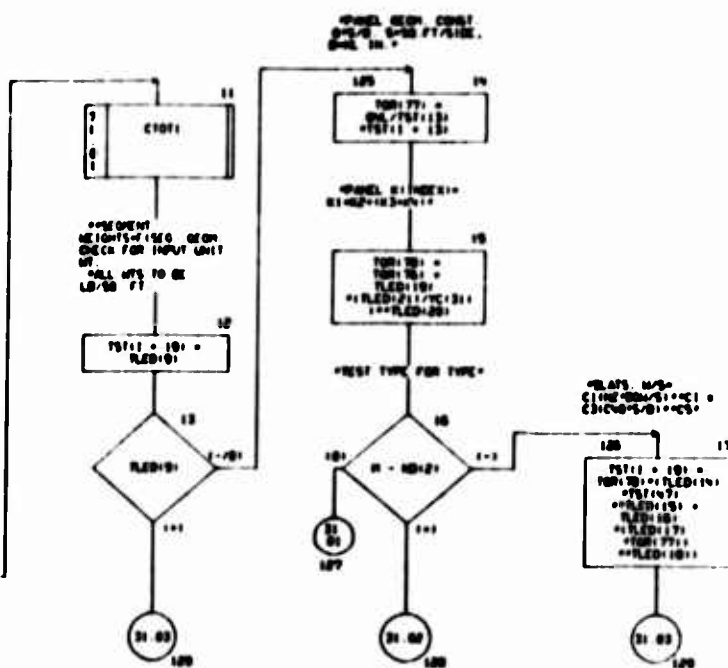
07
  PSY(1) = 131
  Q=10=PSY(1)=171
  PSY(1) = 201
  PSY(1) = 271
  PSY(1) = 271
  PSY(1) =
  271=PSY(1) + 201

09
  PSY(1) = 201
  PSY(1) = 201
  PSY(1)=10111
  PSY(1) = 271
  PSY(1) =
  271=10111
  PSY(1) = 2711

09
  PSY(1) = 331
  PSY(1) =
  301=PSY(1) +
  PSY(1)

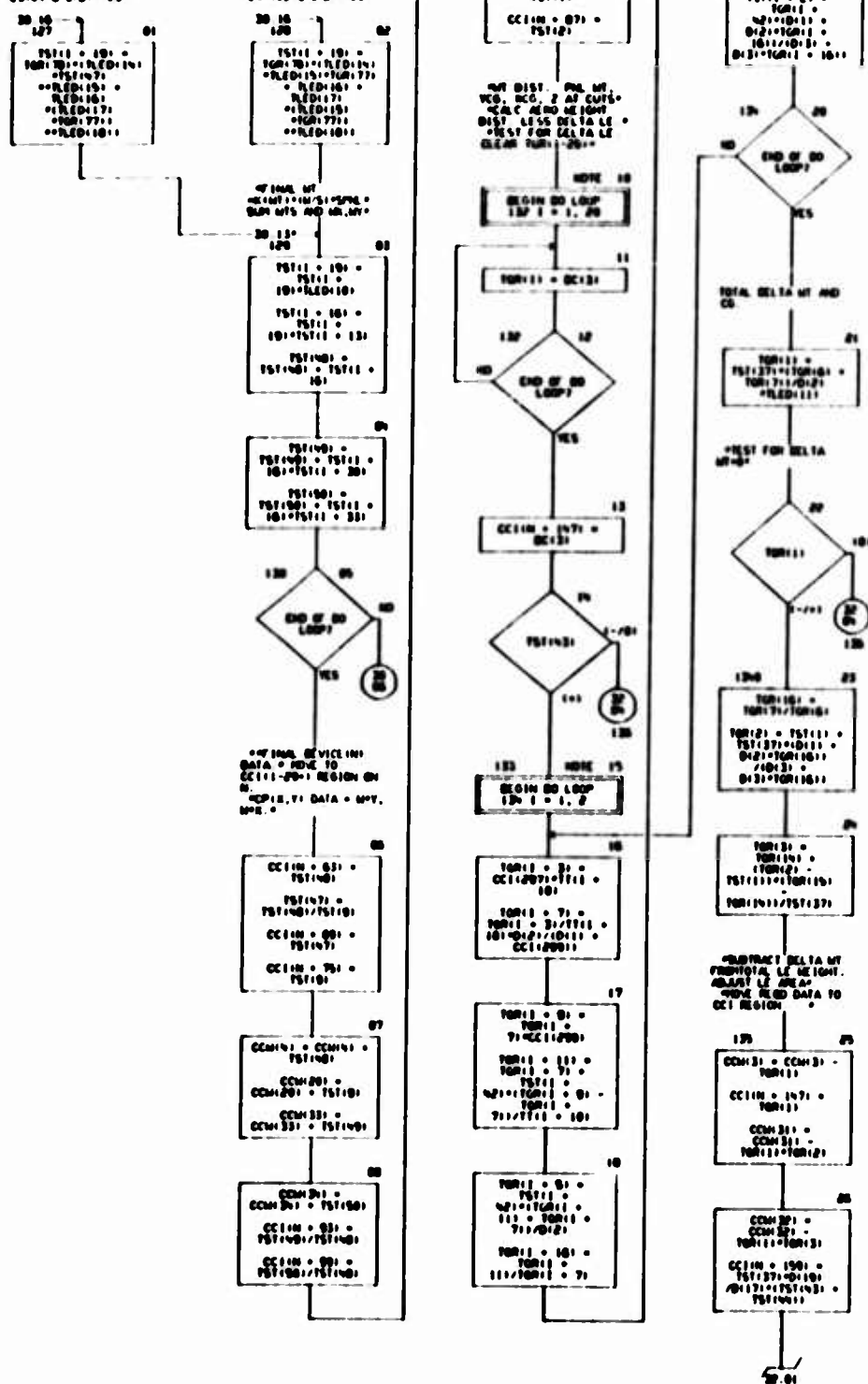
*SEGMENT P/C AN REP
*P/C LOC. IN P/C(1)

10
  PSY(1) = PSY(1) +
  201
  
```



000000 0000
 000000 0000
 000000 0000

00 0000 0000
 01 0101 0101 0101 0101
 02 0202 0202 0202 0202



1271

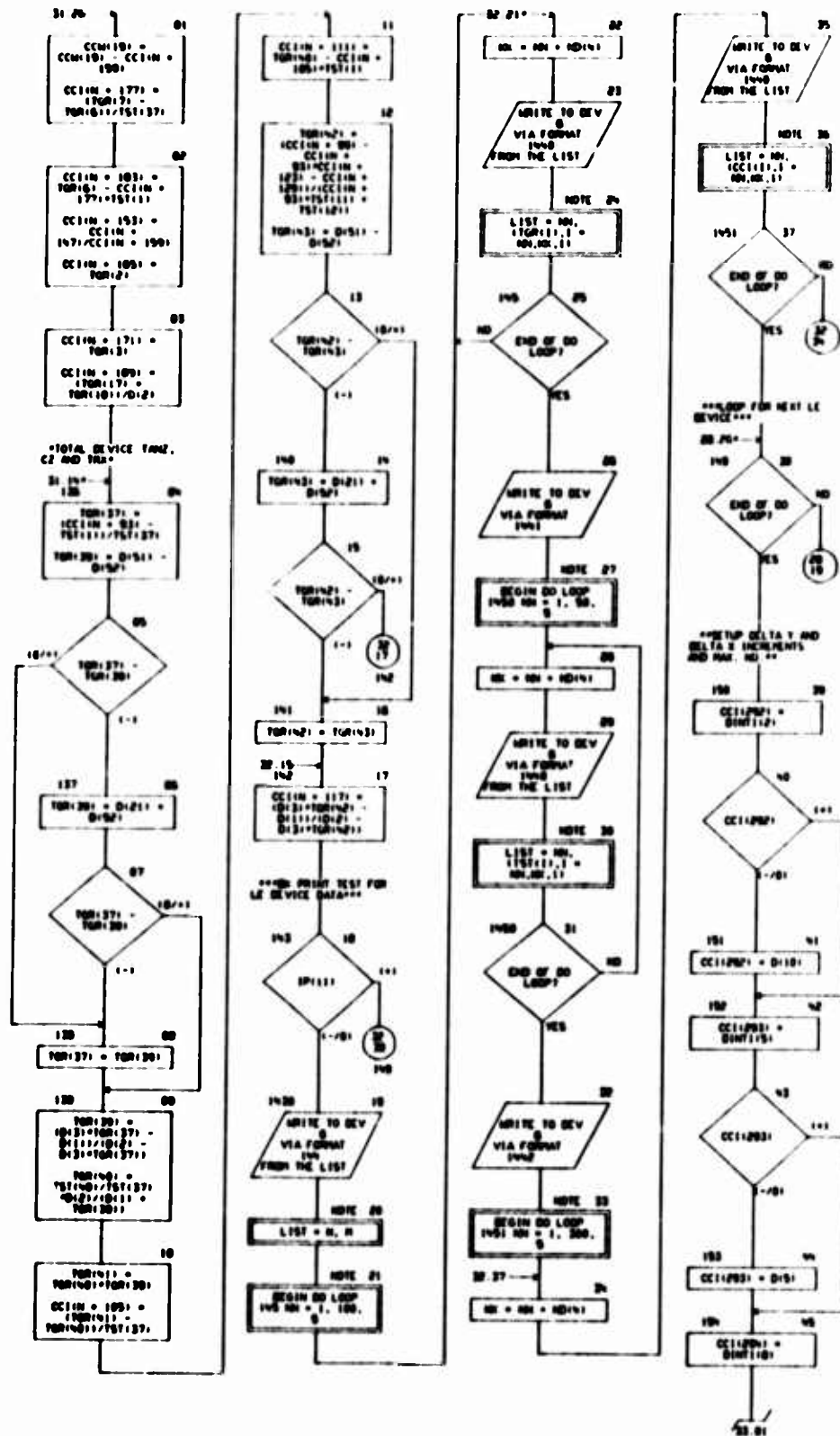


CHART TITLE - SUBROUTINE LEWT

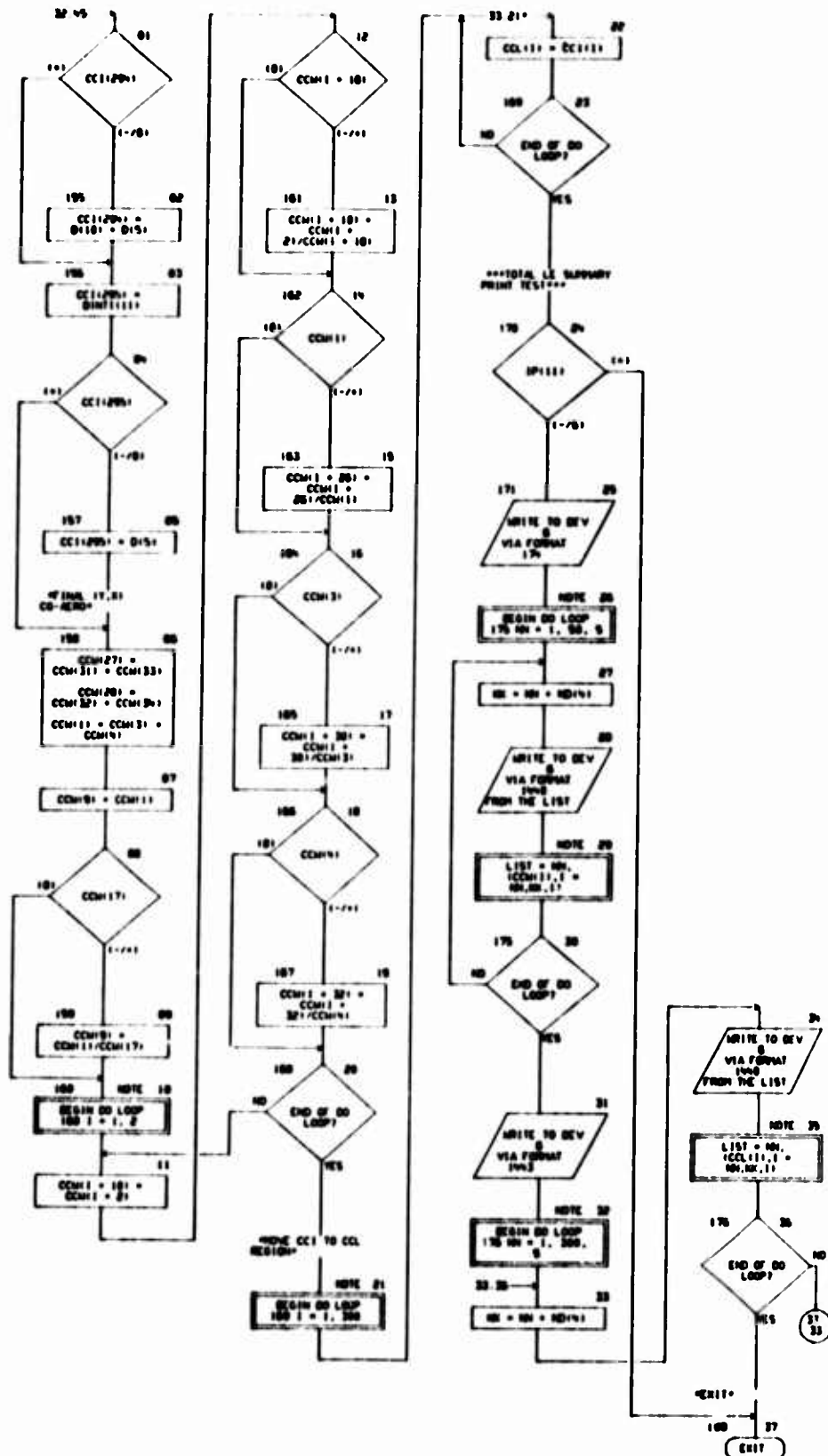


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON 1
COMMON /IPRINT/ IP(100)
DIMENSION T(16270),D(2000),CD(2000),ND(100),DC(100),
VC(150),TT(24),TG(300),TNG(400),VTC(60),
TS(150),TOR(100),CCM(50),CC(300),CCL(300),
TAND(0),CCL0(0),SIND(0),COS0(0),
BLE(30),BLE0(30),BLEBK(50),D... (112),PLED(15)
EQUIVALENCE (D(1),T(200)),(CD(1),T(412)),(ND(1),T(612)),
(CC(1),D(140)),(VC(1),T(20)),(TT(1),T(41)),(TG(1),T(100)),
(TND(1),T(130)),(TS(1),T(170)),(TOR(1),T(175)),
(CCM(1),CD(1)),(CC(1),CD(105)),(CCL(1),CD(51)),(VTC(1),T(35)),
(BLE(1),D(1205)),(BLE0(1),D(1500)),(BLEBK(1),D(1530)),
(0INT(1),D(113)),
(PLED(1),TOR(51)),(D(410),D(200)),
(002,T(12)),(05102,T(15)),
(TAND(1),T(127)),(CCL0(1),T(131)),(SIND(1),T(140)),
(COS0(1),T(146)),(COTEA,T(152))
EQUIVALENCE (AL,TG,D(205)),(AREA,D(240)),(04,D(187)),
(000,D(105)),
(1,ND(20)),(0,ND(27)),(0,ND(30)),(0,ND(31)),(0,ND(32))
9003 FORMAT(1H,70X,20H** C701 (CALLED FROM LEWT) - IP(0) **)
144 FORMAT (00H) **LEWT SUBR. LE SERVICE SUMMARY DATA ARRAYS--TOR,
TS, CC***,TSK,10H** LEWT - IP(1) **/00H **LE SERVICE,12,
ON TYPE,12,1H**/00H TOR)
1440 FORMAT (1H 24,2X10 0)
1441 FORMAT (00H TS)
1442 FORMAT (00H CC)
1443 FORMAT (00H CCL)
174 FORMAT (70H) **LEWT SUBR. LE HEIGHT AND DISTRIBUTION SUMMARY A
RRAYS--CCM, CCL***,10H,10H** LEWT - IP(1) **/00H CCM)

```


08/10/74

AUTOLON CHART SET - SLEEP WING AND EXPENDABLE REAR - PAID 25

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****ROUTINE PLAN*****

RE STRUCTURE EVALUATION AND CONTROL

.....

7-11-68

00 13-4
•••••
GEORGETOWN, WY. EST.
DIST. CO. AND
INTERIOR

•••••

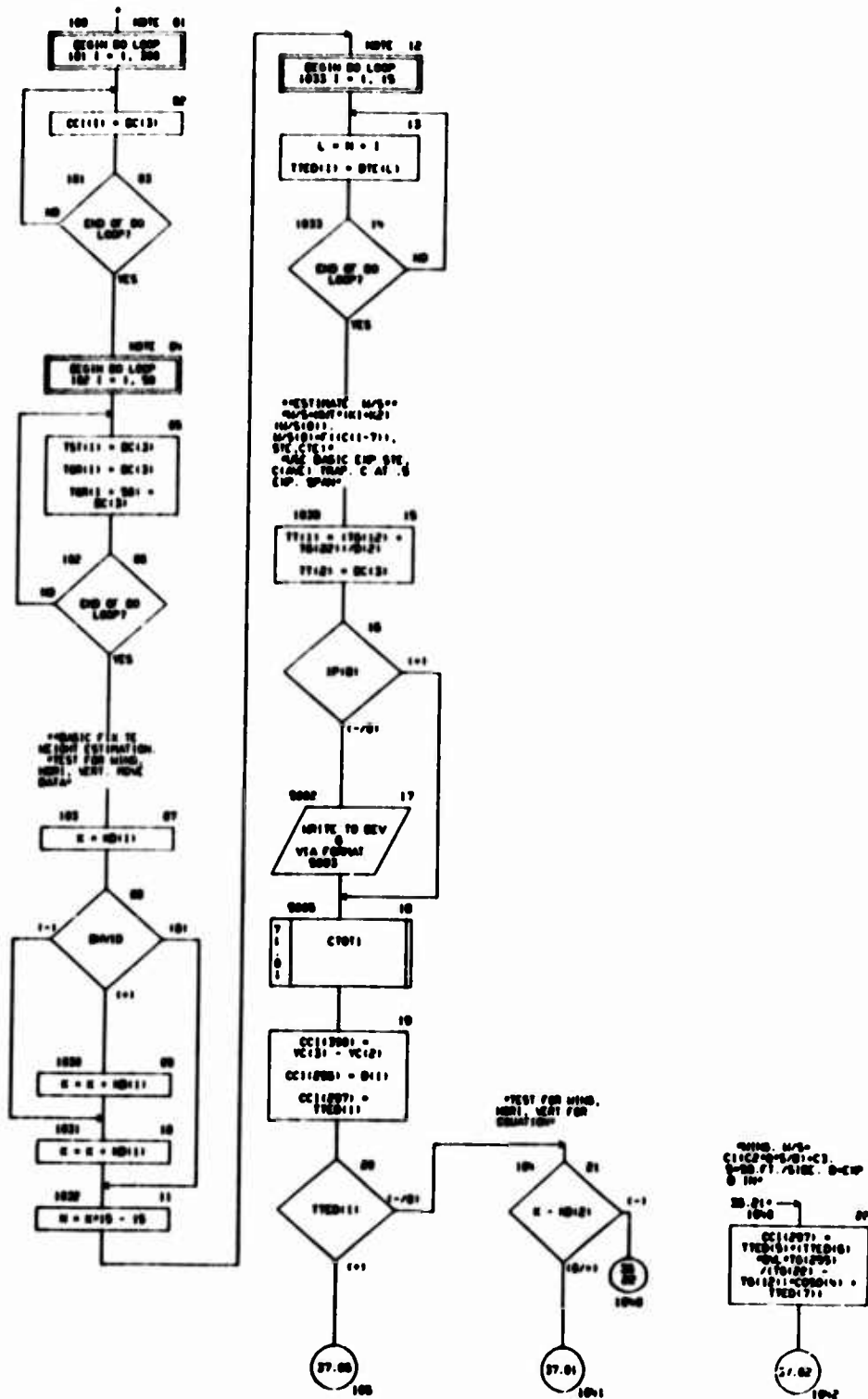


CHART TITLE - SUBROUTINE TEND

REMARK: TEND TEND USE
SOME END FORM NO
01000

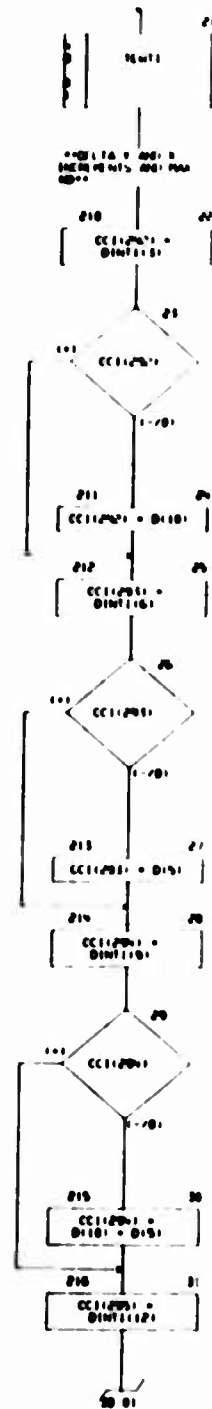
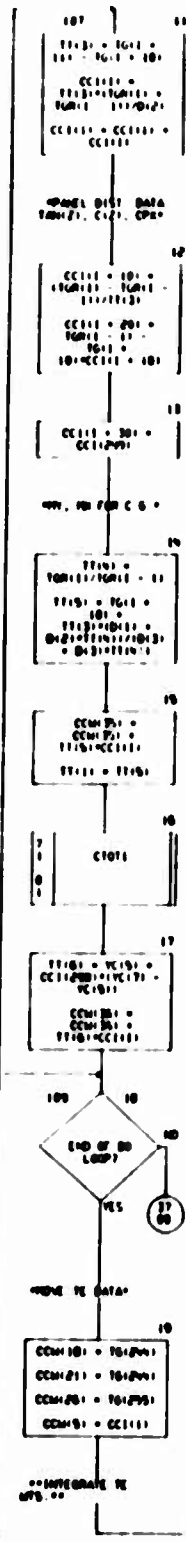
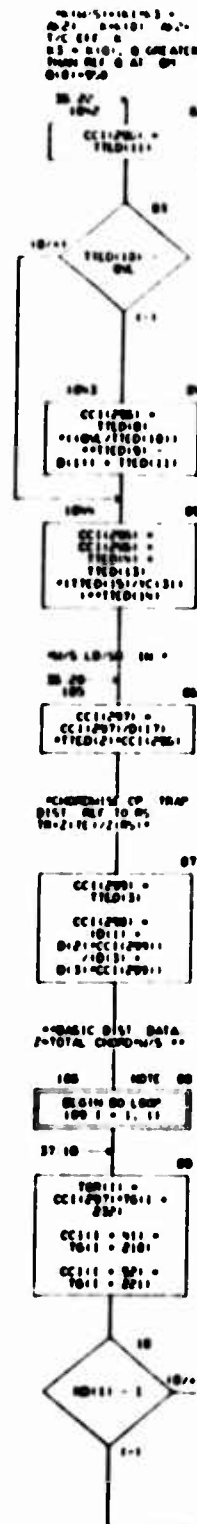
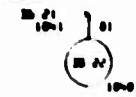


CHART TITLE - SUBROUTINE TEST

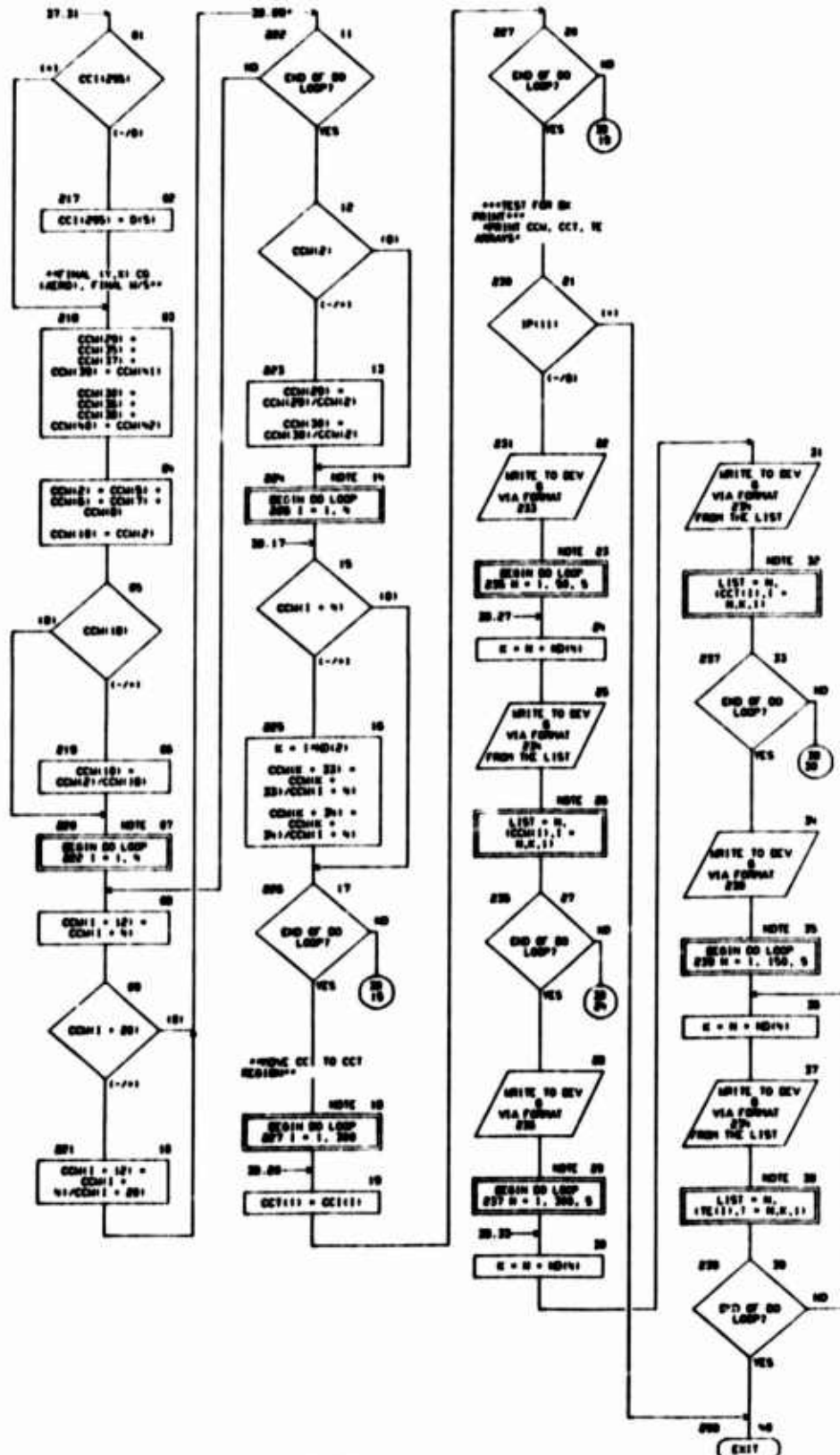


CHART TITLE - NEW PROCEDURAL STATEMENTS

```

COMMON /PRINT / IP=00
DIMENSION T(670),D(2000),CD(2000),ND(100),CC(100),
VC(150),T(120),TG(100),TNG(400),VTC(60),
TST(50),TGR(100),CCM(50),CC(100),CCT(100),
DTE(45),DTE(150),DTE(120),DINT(12),TTE(40),DTE(15),
DPL(20),DALL(50),DSP(25),
TE(150),
TAND(0),CCLO(0),SIND(0),COS(0)
EQUIVALENCE (D(1),T(200)),(C(1),T(120)),(ND(1),T(670)),
(VC(1),D(100)),(VTC(1),T(200)),(TTE(1),T(40)),(TGR(1),T(100)),
(TNG(1),T(100)),(TST(1),T(120)),(TGM(1),T(175)),
(CCM(1),C(1)),(CC(1),CD(100)),(CCT(1),CD(150)),
(DTE(1),D(125)),(DTE(1),D(150)),(DTE(1),D(160)),
(DINT(1),D(143)),(TTE(1),TGR(1)),(DSP(1),D(175)),
(TAND(1),T(120)),(CCLO(1),T(130)),
(SIND(1),T(140)),(COS(1),T(146)),
NAME A,D(20),IOW,D(87),VTC(1),T(125),DPL(1),D(175),DALL(1),D(175),DSP(1),D(175)
EQUIVALENCE (I,ND(20)),(M,ND(127)),(L,ND(20)),(R,ND(150)),
(M,ND(131)),
(TE(1),CD(125)),
(ND(1),D(200))
9003 FORMAT(1H,70X,END** CLOS (CALLED FROM TEND) - IP(0) **)
933  FORMAT (7H) ***TEND SUBR - TE HEIGHT AND DISTRIBUTION SUMMARY A
945  GRAYS-CCM, CCT, TE***,14X,END** TEND - IP(1) **/END CCM I
974  FORMAT (1H,14X,END 0)
975  FORMAT (6H,CCT I)
976  FORMAT (6H,TE I)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE TEST*****

SERVICE DESIGN AND DISTRIBUTION EVALUATION

CHART TITLE - SUBROUTINE RELEV

RELEV

NO 00
 **RE STRUCTURE
 GEOMETRY, WING, ELEV,
 DIST, CG AND
 INERTIA*

TEST SERVICE NO



SPOILERS HAVE DATA

112
 N = N+15 - 15
 TRED+15 = 0
 DTRED+15 = 0
 TRED+20 = 0
 DTRED+20 = 0

NOTE 03
 BEGIN DO LOOP
 113 I = 1, 10

L = N + 1
 TRED+1 = 11
 DTRED+1 = 1

114
 I - NO+51
 YES NO

115
 I - NO+51
 YES NO

116
 TRED+1 = 12
 DTRED+1 = 0
 TRED+20 = 20
 DTRED+20 = 0
 TRED+30 = 20
 DTRED+30 = 0

117
 TRED+1 = 30
 DTRED+1 = 101

118
 END OF DO LOOP?

119
 YES NO

120
 YES NO

121
 YES NO

122
 YES NO

123
 YES NO

124
 YES NO

125
 YES NO

126
 YES NO

127
 YES NO

128
 YES NO

**NO 3, 4, 5, 6. MOVE
 PANEL DATA 120
 FLAPS=3, 4, 5 ***
 **ALL 05. CHECK FOR
 ELEV. ON BLADE FOR
 NO.1 ON NO.1
 **ON NO.1, TYPE 10
 MAY BE 0-ALL
 0-ELEV. 0-ALL
 **IF 10-0.1, 2, 3
 SERVICE NO. 0-ALL
 **IF 1 FOR FLAPS, 2
 FORALL, 3 FOR ELEV, 4
 FOR FLAPS.

01 01
 129

N = N+20 - 00
 130
 131
 132

NOTE 10
 BEGIN DO LOOP
 133 I = 1, 20

L = N + 1
 TRED+1 = 11
 DTRED+1 = 1

134
 I - NO+51
 YES NO

135
 I - NO+51
 YES NO

136
 CHECK FOR NO CILE
 AND SERVICE NO 6. FOR
 ALL ELEV, NO 6.

137
 NO+51 = 0
 YES NO

138
 YES NO

139
 YES NO

140
 YES NO

141
 YES NO

142
 YES NO

143
 YES NO

144
 YES NO

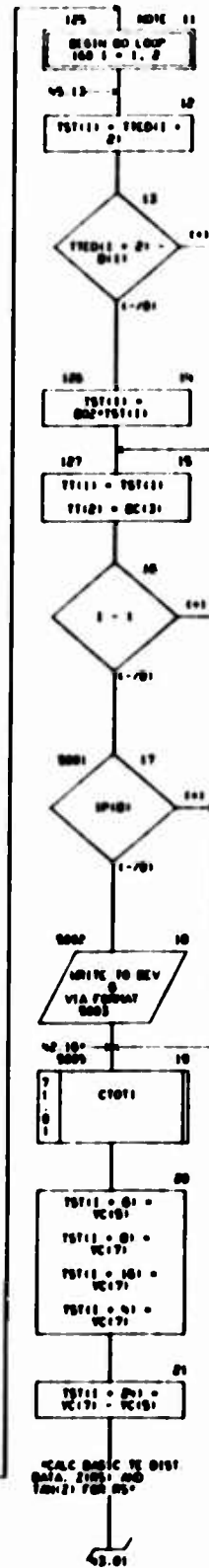
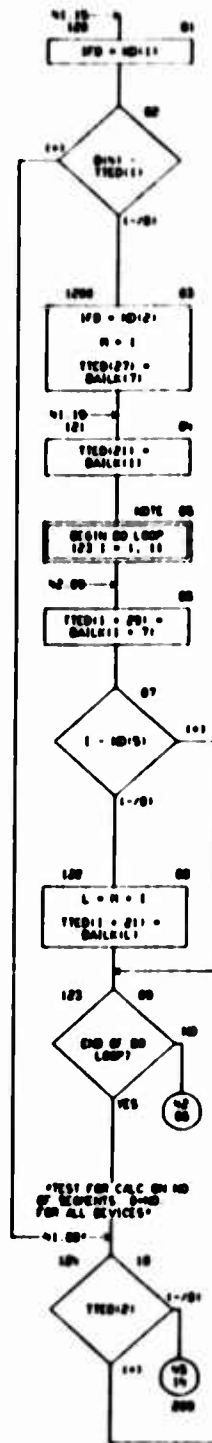
145
 YES NO

146
 YES NO

147
 YES NO

148
 YES NO

QUEST IF ALL DATA IS
FOR FLAP TIME.



1282

1283

[illegible]

CHART TITLE - NON-PROLIFERATION STATEMENTS

```

COPPER 1
COPPER 1/PRINT 1P1001
DIRECTION 1161201, D120101, CD12001, ND11001, DC11001,
VC11001, T11201, 1612001, T112001, V11001,
PS11001, T111001, CC11001, CC11001, CC11001,
DTE1101, DTE1101, DTE1101, DTE1101, DTE1101, DTE1101,
DTE1101, DTE1101, DTE1101, DTE1101, DTE1101,
TAND101, CC10101, SINE101, COS101,
EQUILIBRIUM 1011, T120111, 1011, T120111, 1011, T120111,
1011, D114011, VC111, T12011, T111, T12011, T12011, T12011,
T12011, T12011, T12011, T12011, T12011, T12011,
1011, CD111, CC111, CD11011, CC111, CD111,
1011, D112011, DTE111, D115011, DTE111, D1161011,
1011, D114311, TTE111, T11511, DTE111, D1173011,
1011, T11211, T11511, TAND111, T11211, CC1011, T11311,
1011, T114011, CC1011, T114011,
1011, D112011, 1011, D11711, VC111, T11511, DTE111, D117511, DTE111,
1011, D117511, DTE111, D117511,
EQUILIBRIUM 11, D112011, 11, D112711, 11, D112011, 11, D113011,
11, D11311, 11, D11311, 11, D11311,
1011, D112011
FORMAT: 111, 111, 111 C1011 CALLED FROM 11111 - 1P1011

```

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****SUBROUTINE TEST*****

TRAILING OFFICE SERVICE MILEAGE ESTIMATION

.....

CHART TITLE - SUBROUTINE RENT1

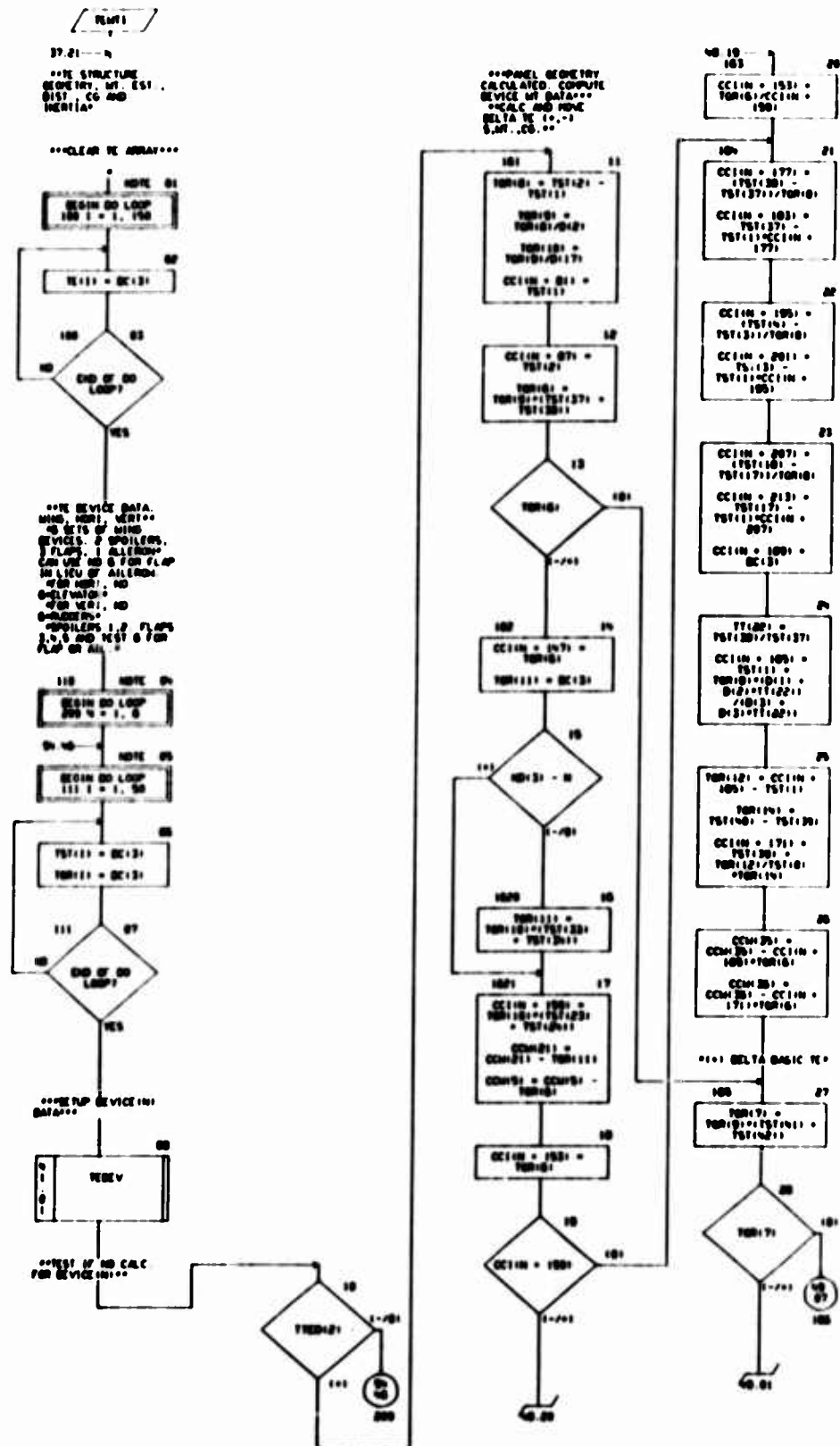


CHART TITLE - SUBROUTINE ROUTE

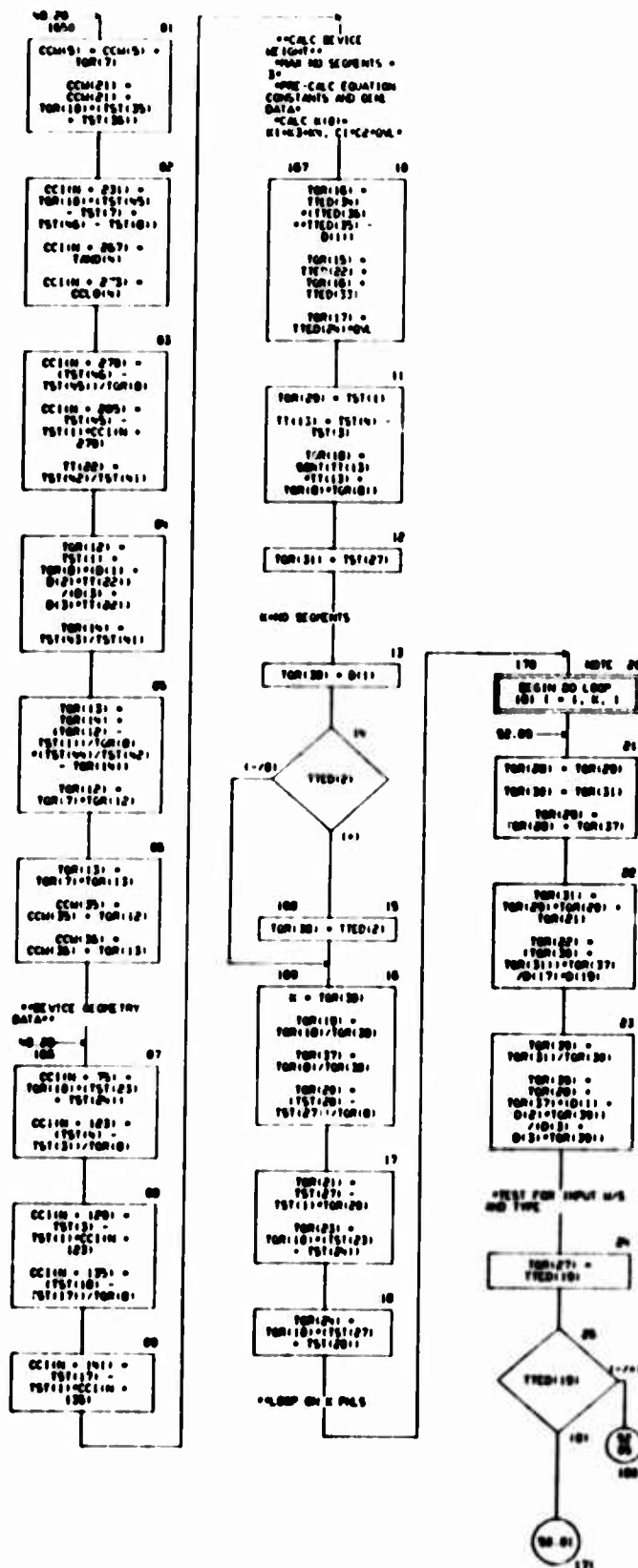


CHART TITLE - SUBROUTINE RMT1

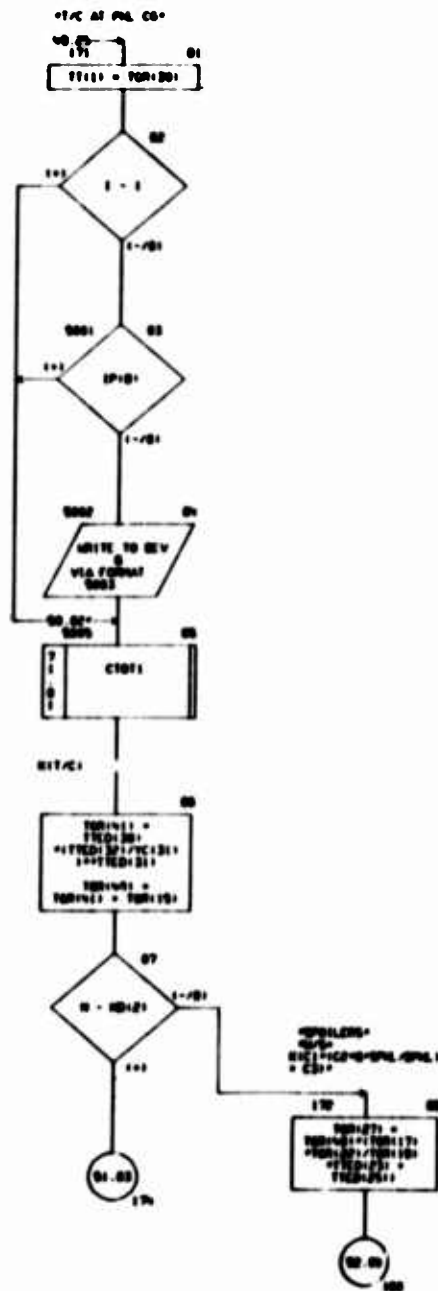


CHART TITLE - SUBROUTINE TENDI

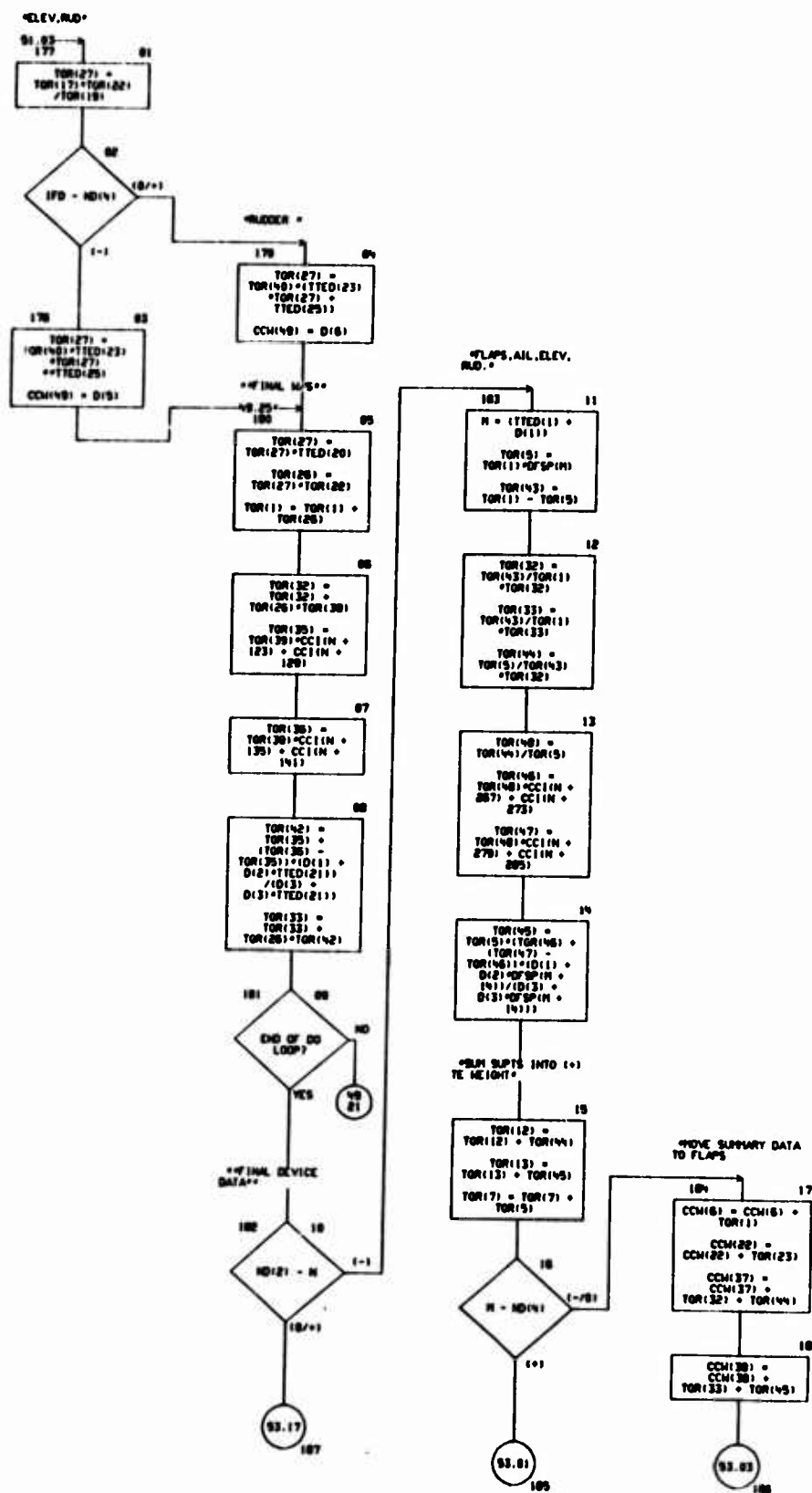
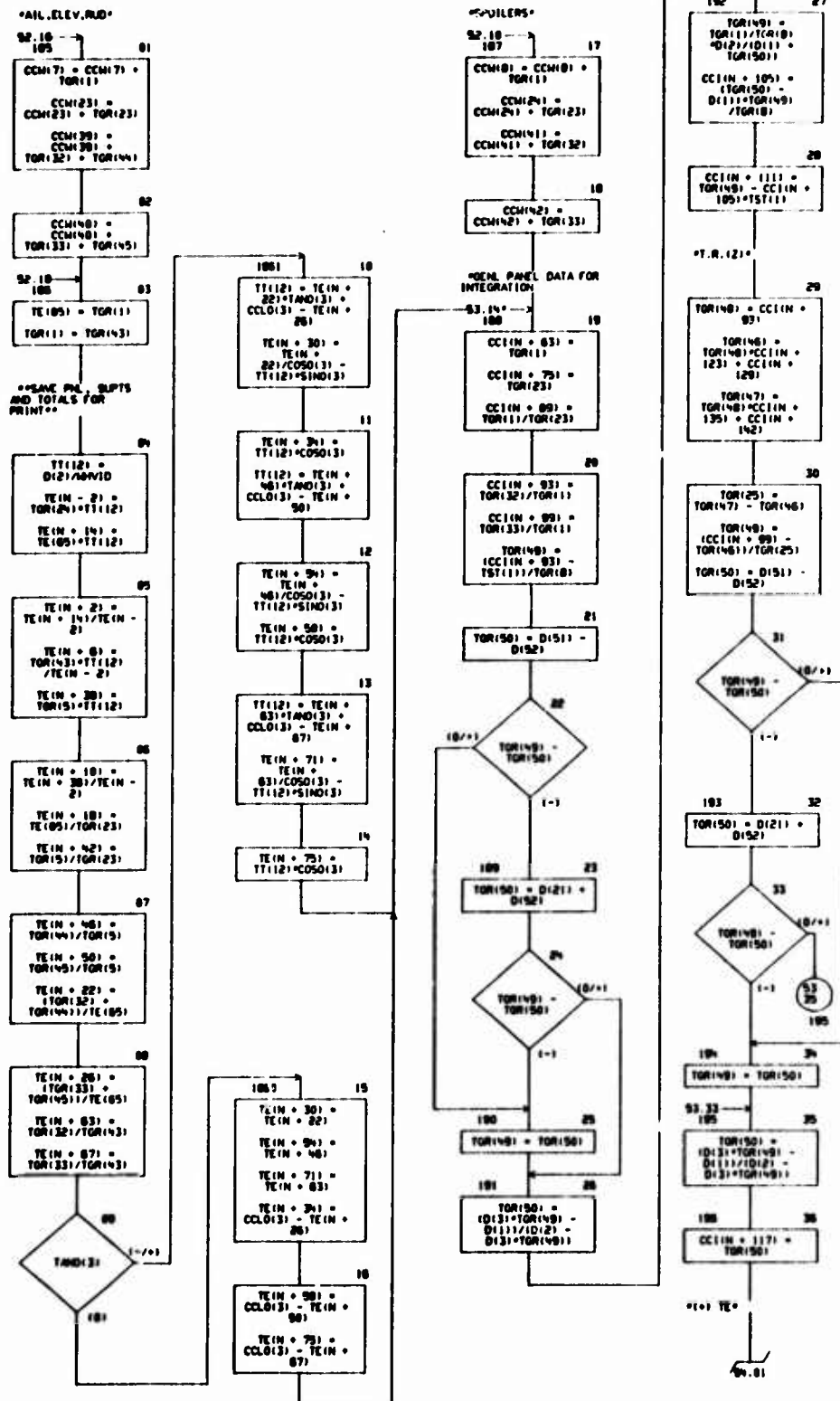


CHART TITLE - SUBROUTINE TENDT



1293

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(100)
DIMENSION T(1620),D(2000),CD(2000),ND(100),DC(100),
VC(150),TT(24),TG(300),TND(400),VTC(60),
TST(50),TGR(100),CCM(50),CCI(300),CCT(300),
DTE(40),DTE0(30),DTE02(20),DINT(112),TTED(40),DSPDK(15),
DFLPK(20),DAILK(30),DFSP(25),
TE(150),
TAND(0),CCLO(0),SIND(0),COS0(0)
EQUIVALENCE (D(1),T(205)),(CD(1),T(412)),(ND(1),T(612)),
(CD(1),D(140)),(VC(1),T(201)),(TT(1),T(411)),(TG(1),T(1001)),
(TND(1),T(1301)),(TST(1),T(1701)),(TGR(1),T(1751)),
(CCM(1),CD(1)),(CCI(1),CD(1051)),(CCT(1),CD(1351)),
(DTE(1),D(1295)),(DTE0(1),D(1500)),(DTE02(1),D(1610)),
(DIN(1),D(1143)),(TTED(1),TGR(51)),(DSPDK(1),D(1730)),
(B02, 12), (B5102,T(151)),(TAND(1),T(122)),(CCLO(1),T(131)),
(SIND(1),T(140)),(COS0(1),T(146)),
INAREA,D(1240), (QAL,D(87)),(VTC(1),T(351)),(DFLPK(1),D(1745)),(DAI
LK(1),D(1705)),(DFSP(1),D(1705))
EQUIVALENCE (I,ND(20)),(N,ND(27)),(L,ND(28)),(K,ND(30)),
(IK,ND(31)),(IFD,ND(32)),(IFK,ND(33)),
(TE(1),CD(1251)),(HAWID,T(57)),
(HAWID,D(205))
9003 FORMAT(1H1,70X,30H** CTOT) (CALLED FROM TEND) - IP(0) **
925 FORMAT (67H1 ***TEND) SUBR. TE DEVICE SUPPLY DATA ARRAYS--TGR,
TST, CC1**,*ZK,P0H** TEND) - IP(1) **/16H0 *TE DEVICE,12,
ON TYPE,12,1H*/0H0 TGR )
927 FORMAT (1H 14,5C10.0)
928 FORMAT (6H0 TST )
929 FORMAT (6H0 CC )

```

08/18/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE RODDLE - PAGE 56

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE LETE*****

*****LE/TE HEIGHT INTEGRATION*****

CHART TITLE - SUBROUTINE LETE1

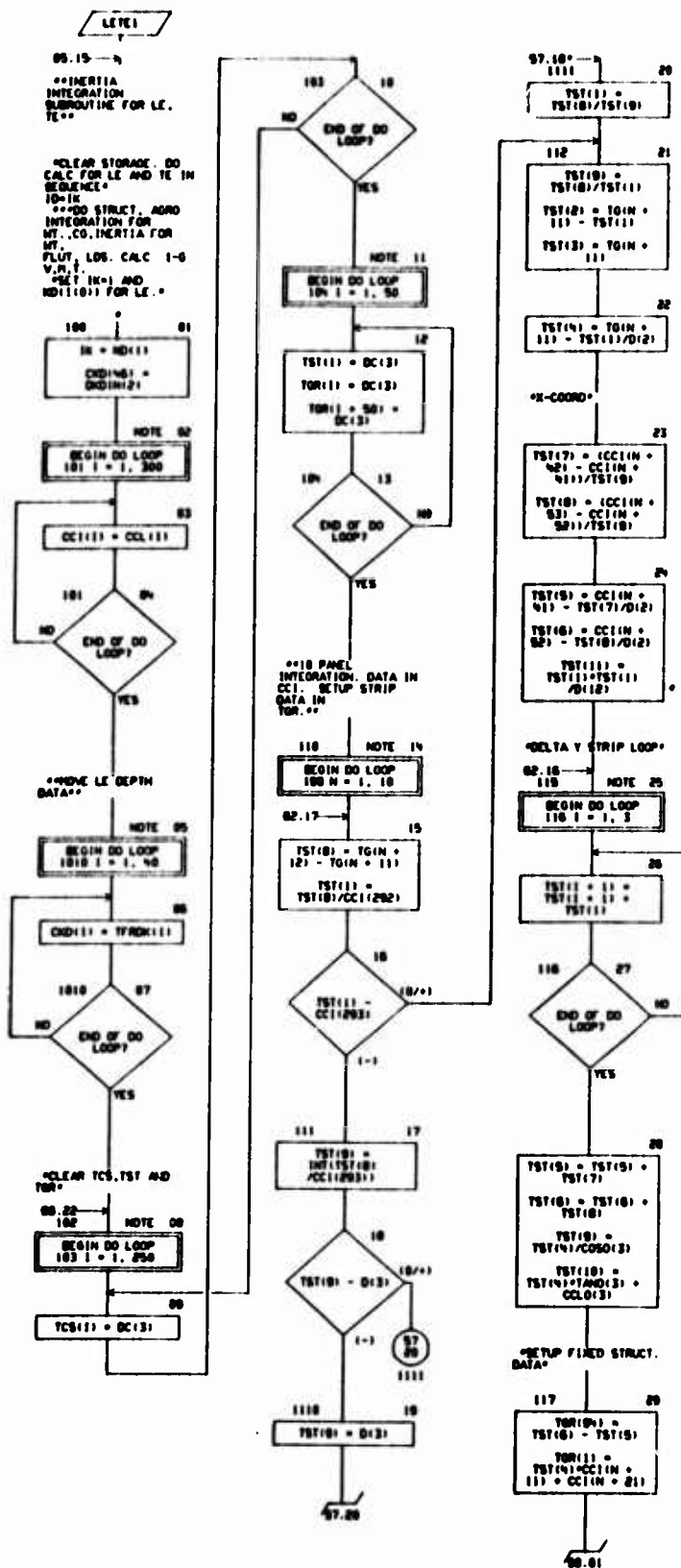


CHART TITLE - SUBROUTINE LEVEL

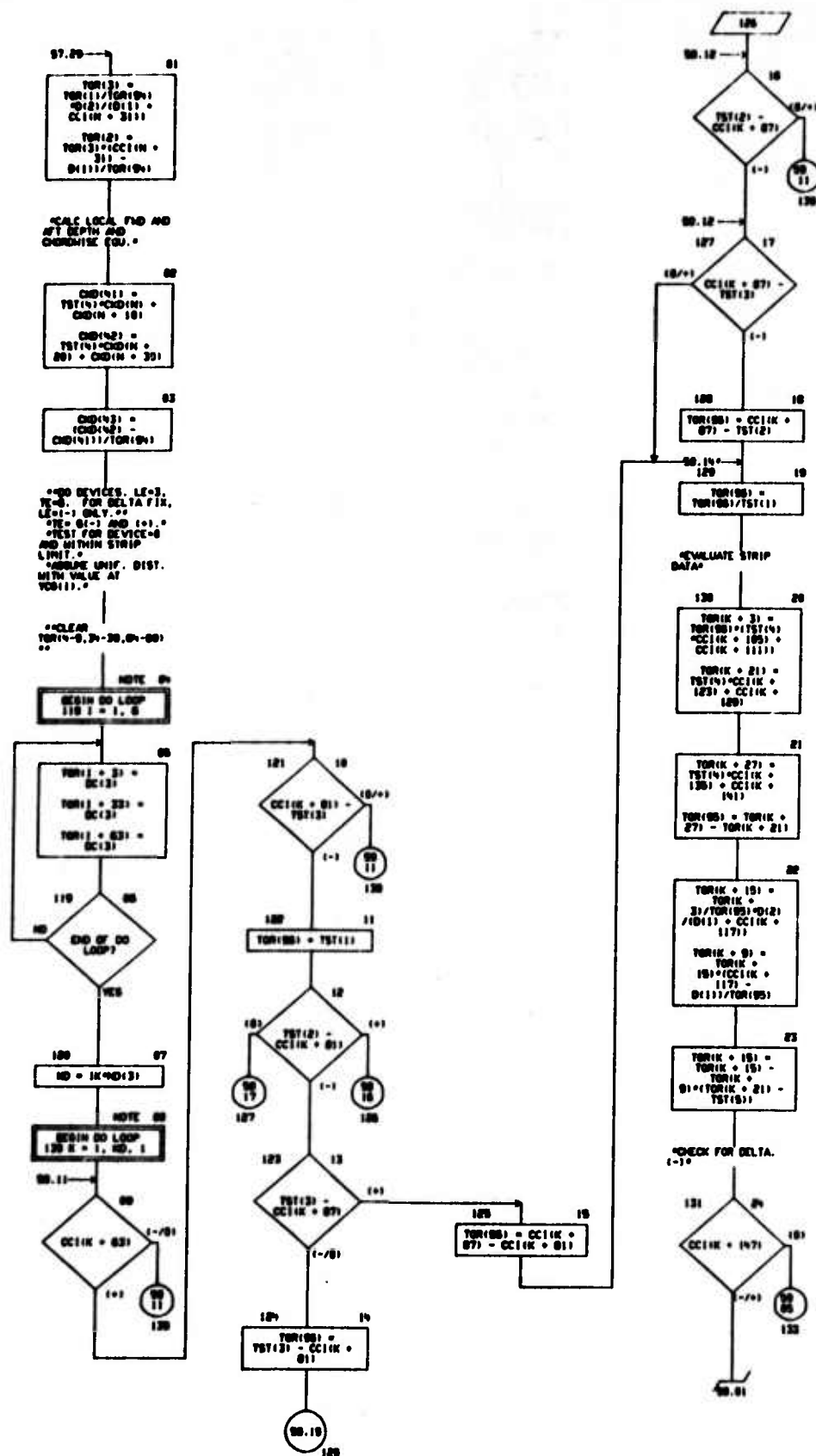


CHART TITLE - SUBROUTINE LCTEI

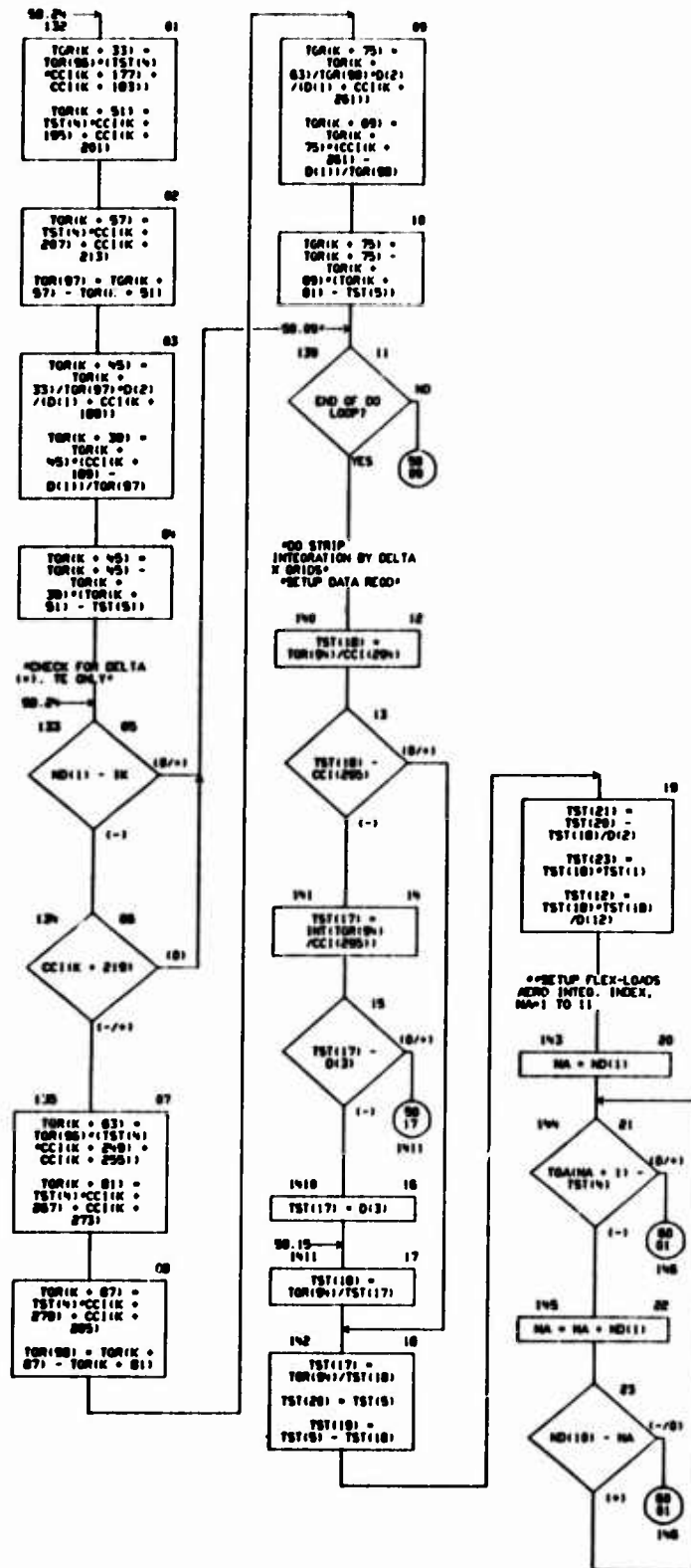


CHART TITLE - SUBROUTINE LEVEL

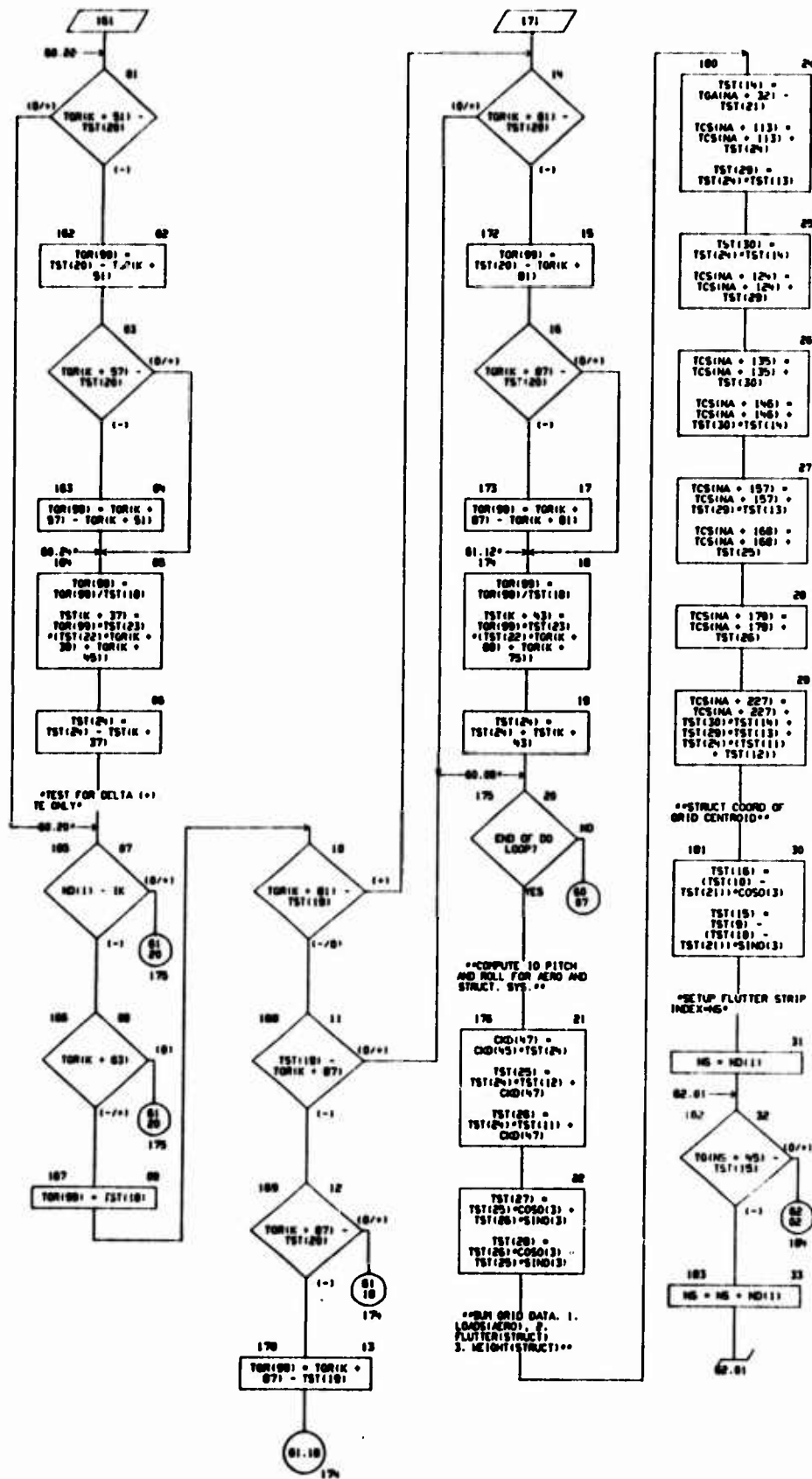


CHART TITLE - SUBROUTINE LETCI

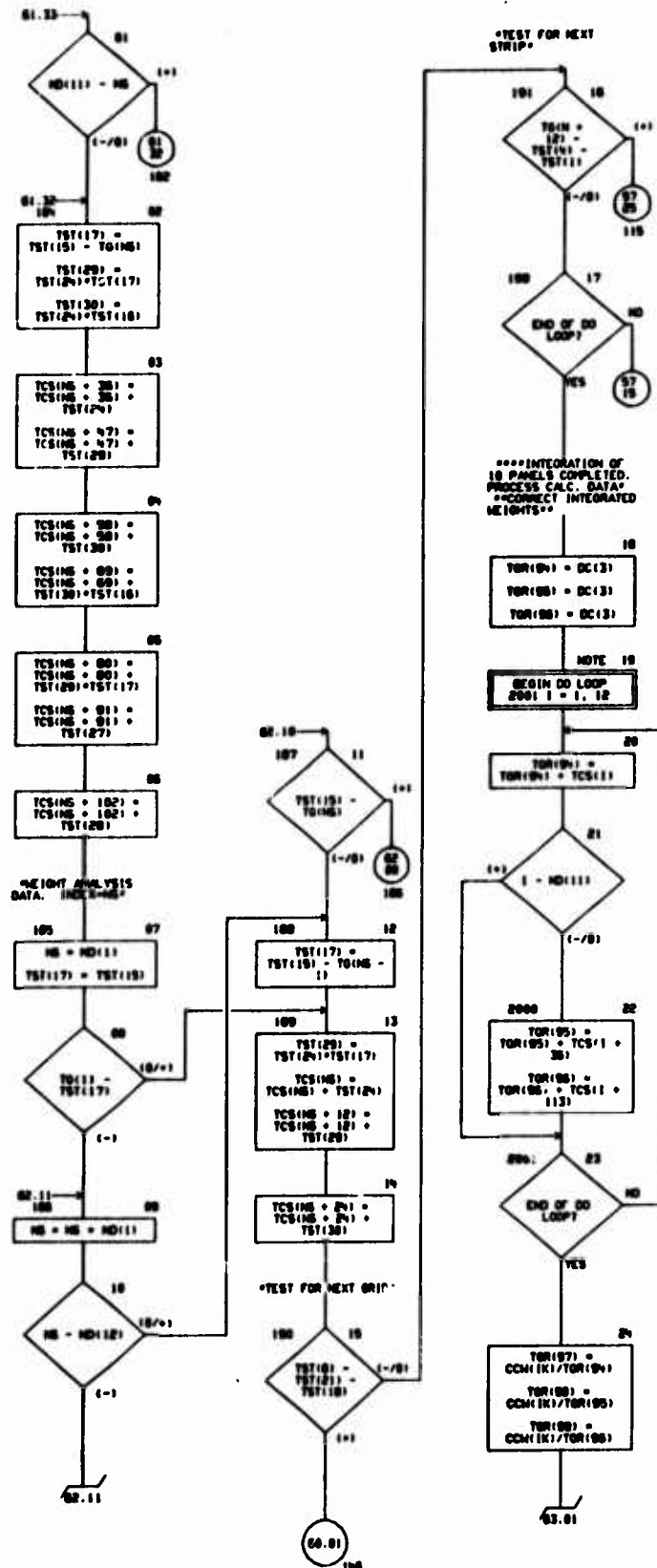


CHART TITLE - SUBROUTINE LETEI

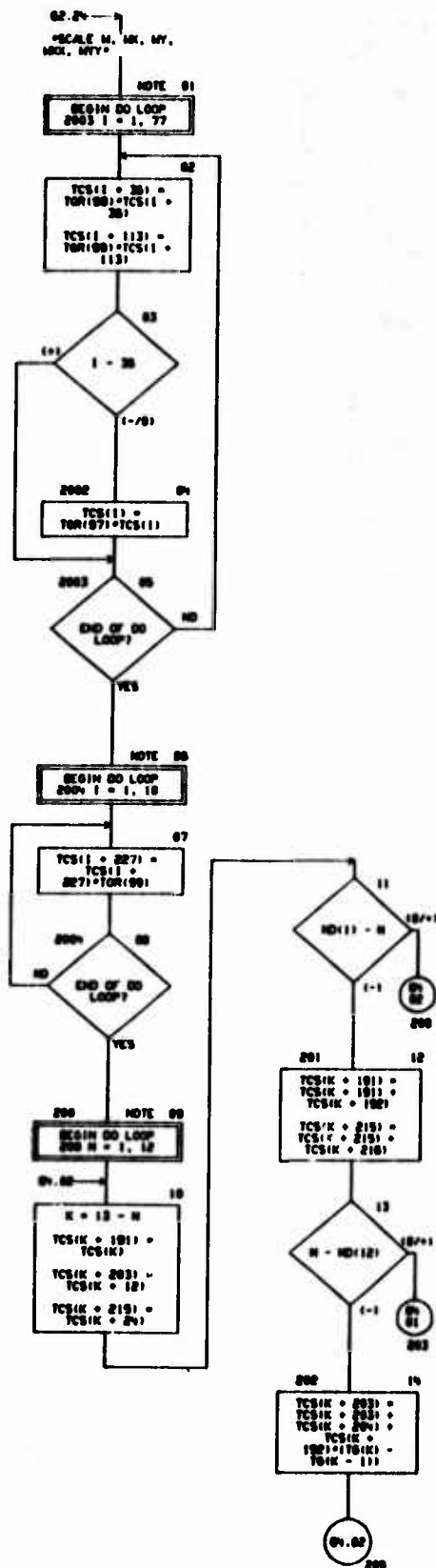


CHART TITLE - SUBROUTINE LETCI

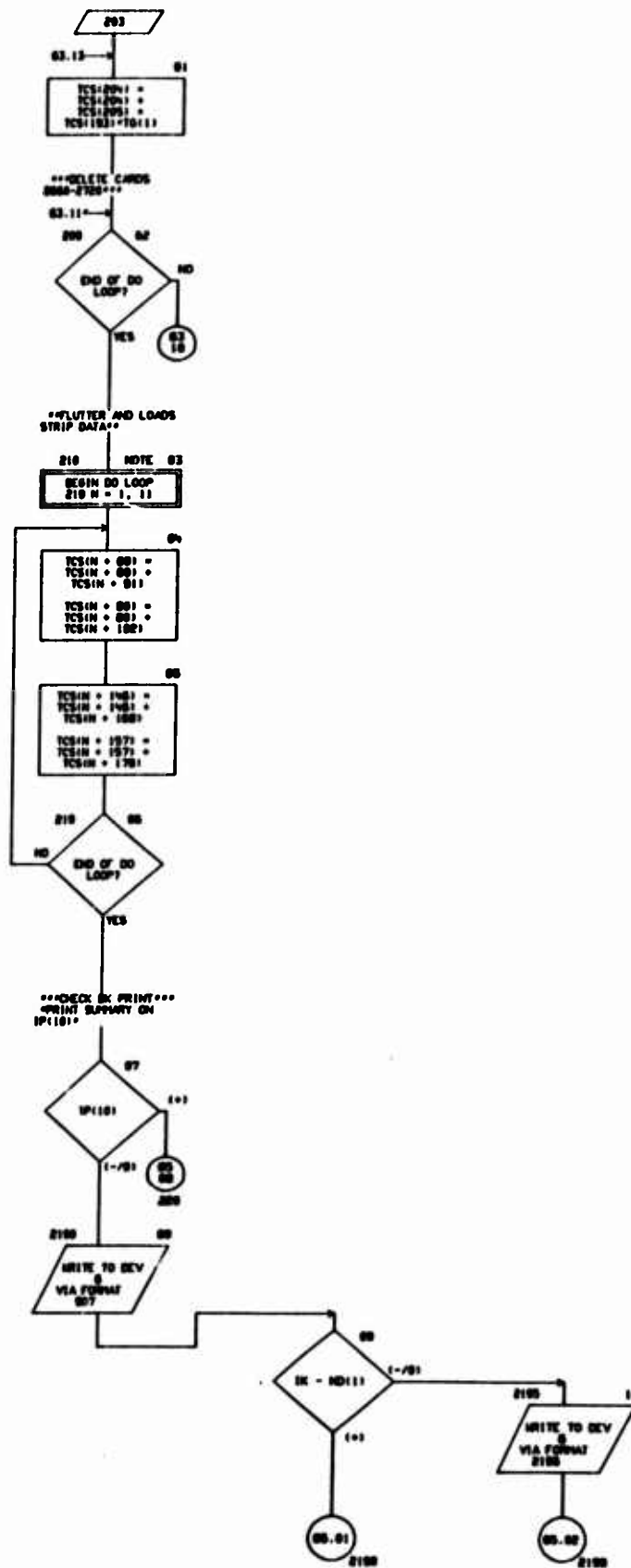
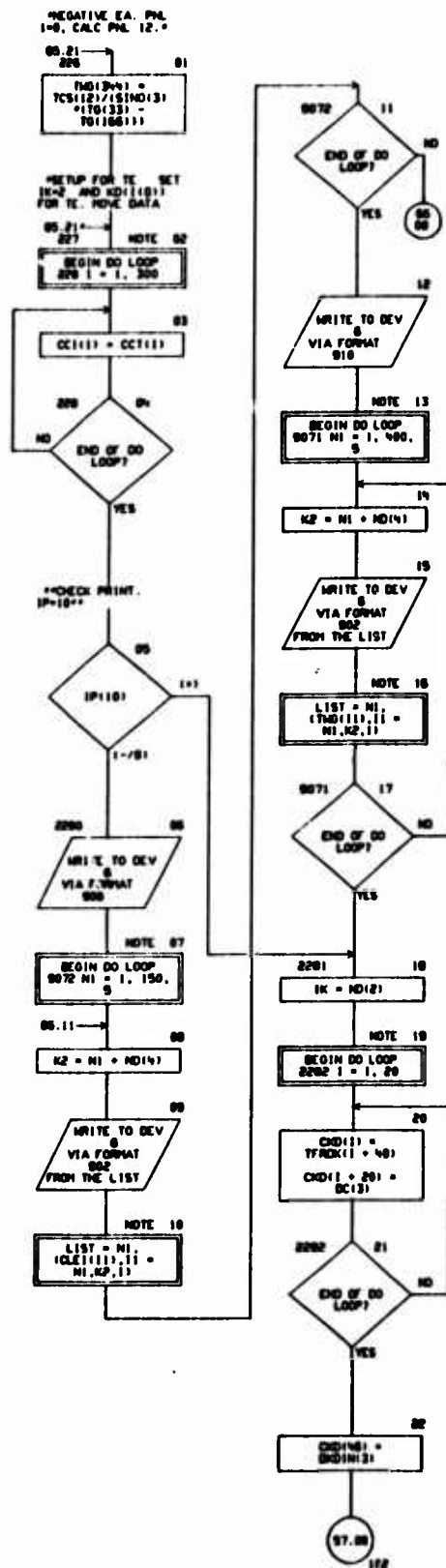


CHART TITLE - SUBROUTINE LCTEI



CNMT TITLE - SUBROUTINE LETEI

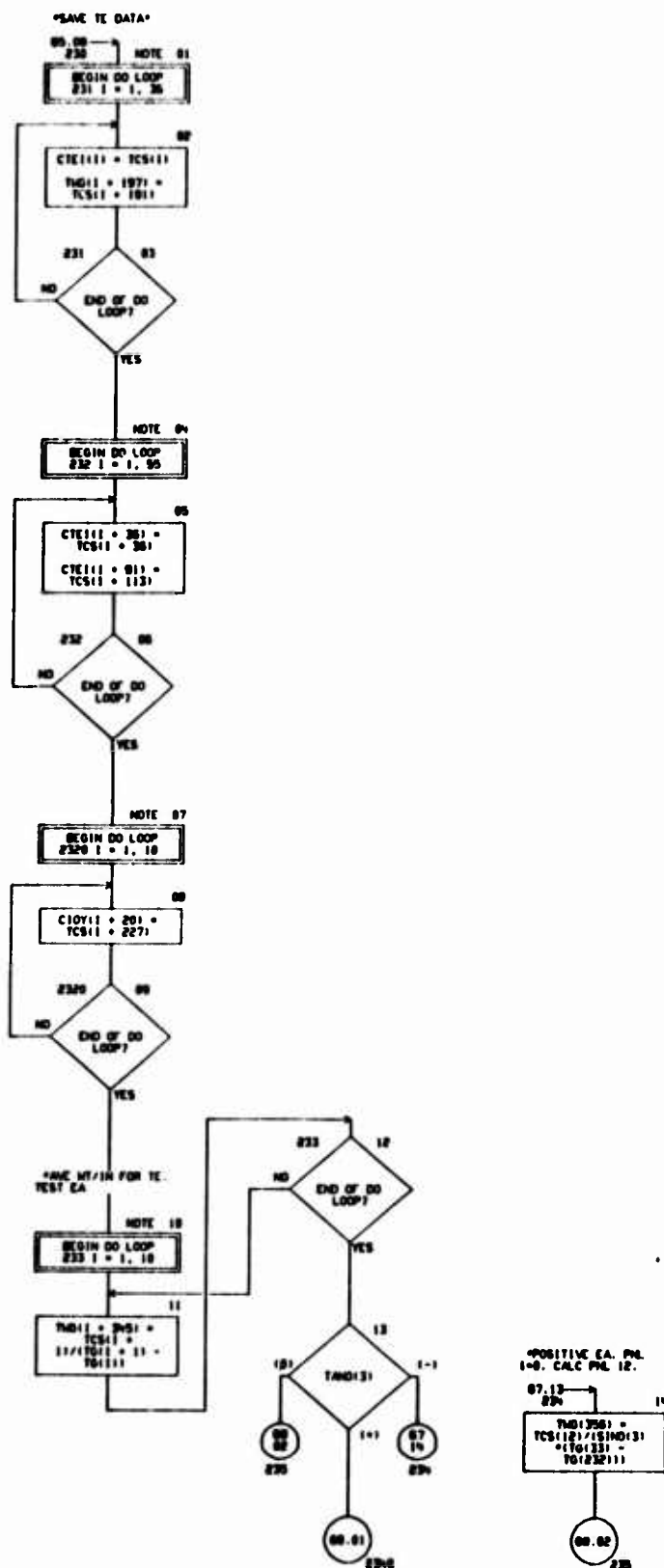


CHART TITLE - SUBROUTINE LETEI

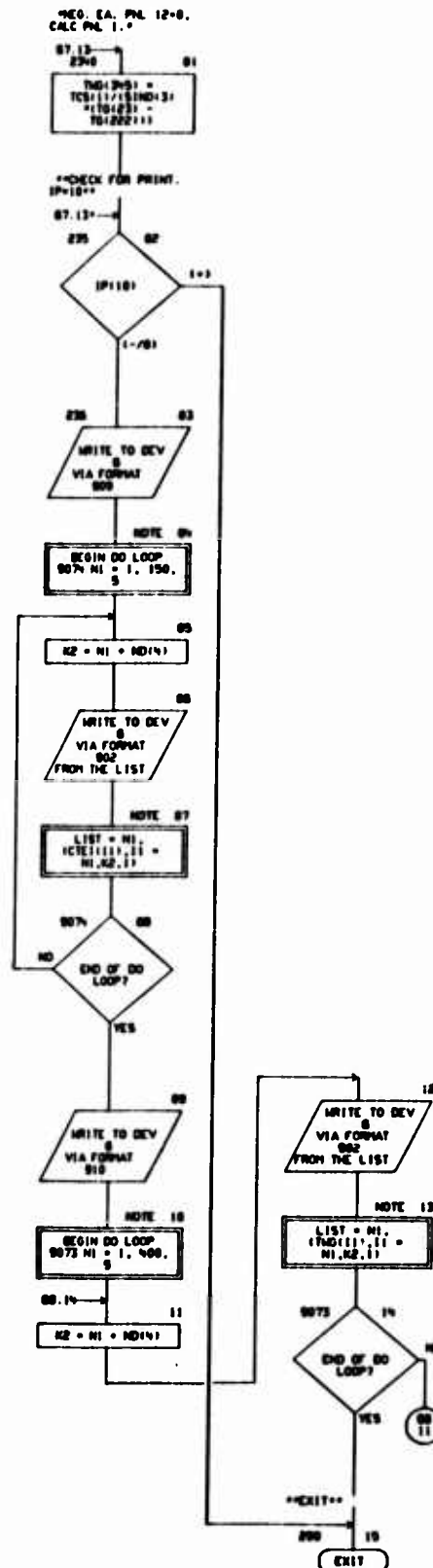


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
CC(1300),TCS(250),TST(50),TOR(100),CLE(1150),CTE(1150),CCL(300),
TGA(125),TFRCK(80),CXD(50),DXDIN(15),
CCH(50),
C10Y(150),
TAND(0),CCLD(0),SIND(0),COSD(0),T0(300),TND(400),CCT(300)
EQUIVALENCE (D(1),T(200)),(CD(1),T(412)),(ND(1),T(612)),
(DC(1),D(140)),(T0(1),T(100)),(TND(1),T(130)),(TST(1),T(170)),
(TOR(1),T(175)),(TAND(1),T(122)),(CCLD(1),T(131)),
(SIND(1),T(140)),(COSD(1),T(146)),
(CC(1),CD(105)),(TCS(1),CD(140)),(CLE(1),CD(051)),
(TGA(1),T(105)),(TFRCK(1),T(1005)),
(CXD(1),CD(105)),(DXDIN(1),D(1070)),
(CCH(1),CD(1)),(C10Y(1),T(50)),
(ND(10),T(57)),
(CTE(1),CD(001)),(CCL(1),CD(51)),(CCT(1),CD(351))
EQUIVALENCE (1,ND(20)),(IN,ND(27)),(INA,ND(201)),(INS,ND(201)),
(ND,ND(30)),(IK,ND(31))
2186 FORMAT (20H          **LEADING EDGE**)
2187 FORMAT (20H          **TRAILING EDGE** )
002 FORMAT (1H 14,SE10.0)
004 FORMAT (04H TCS )
007 FORMAT (50H)      **PLE/TE INERTIA INTEGRATION SUBR FINAL DATA**,
      20H** LE TE - IP(10) **
008 FORMAT (04H CLE1)
009 FORMAT (04H CTE1)
010 FORMAT (04H TND )

```

06/18/74

AUTOFLW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 70

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE C10T1*****

PLATFORM CHORD EVALUATION

CHART TITLE - SUBROUTINE CTOT1

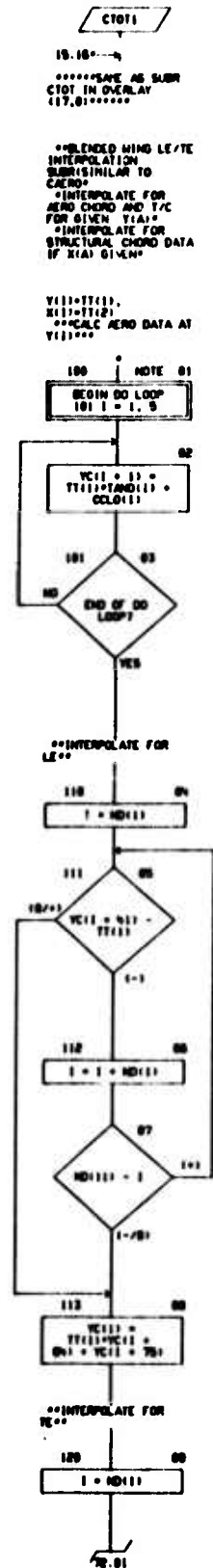


CHART TITLE - SUBROUTINE CT011

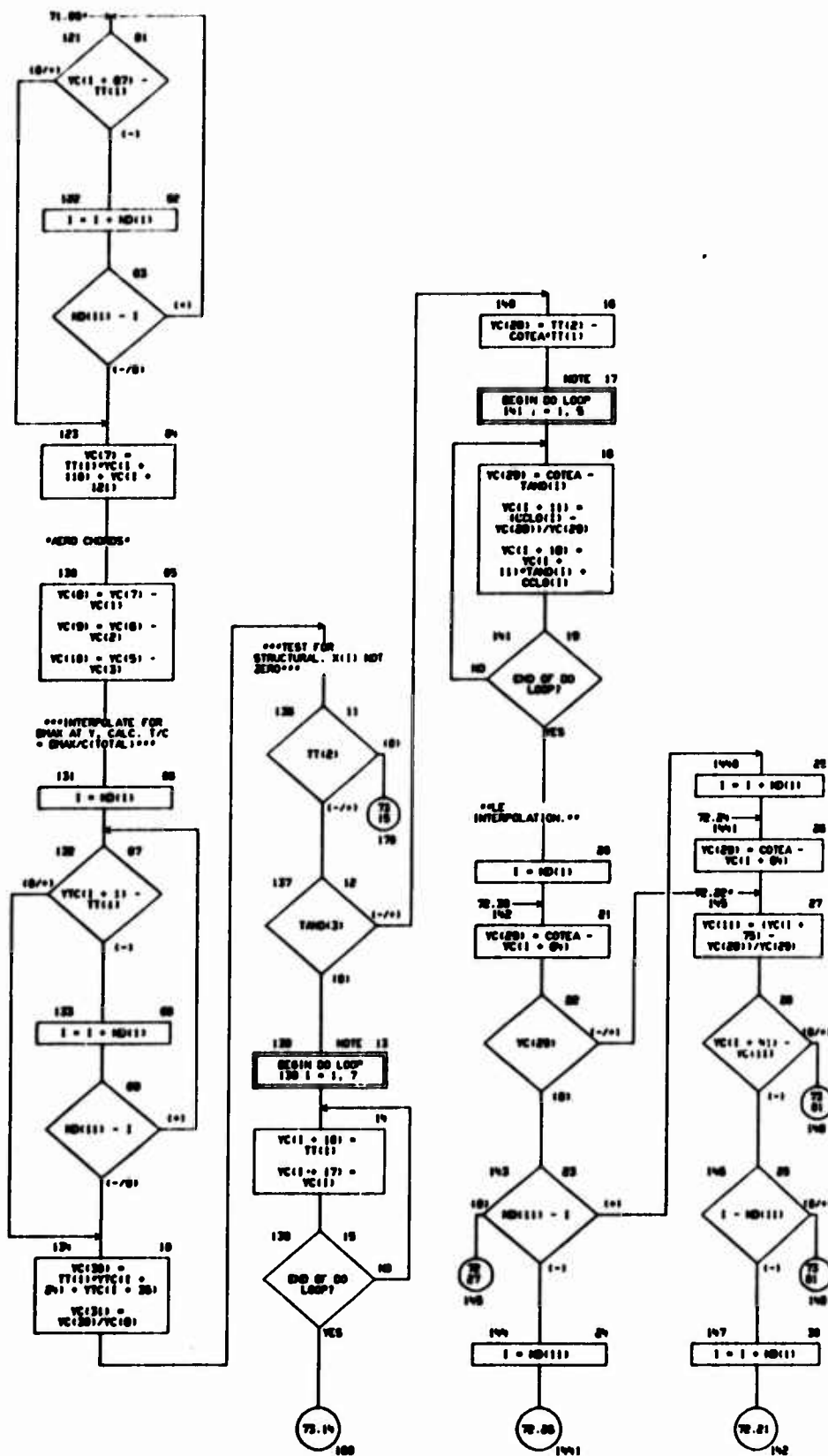


CHART TITLE - SUBROUTINE C1011

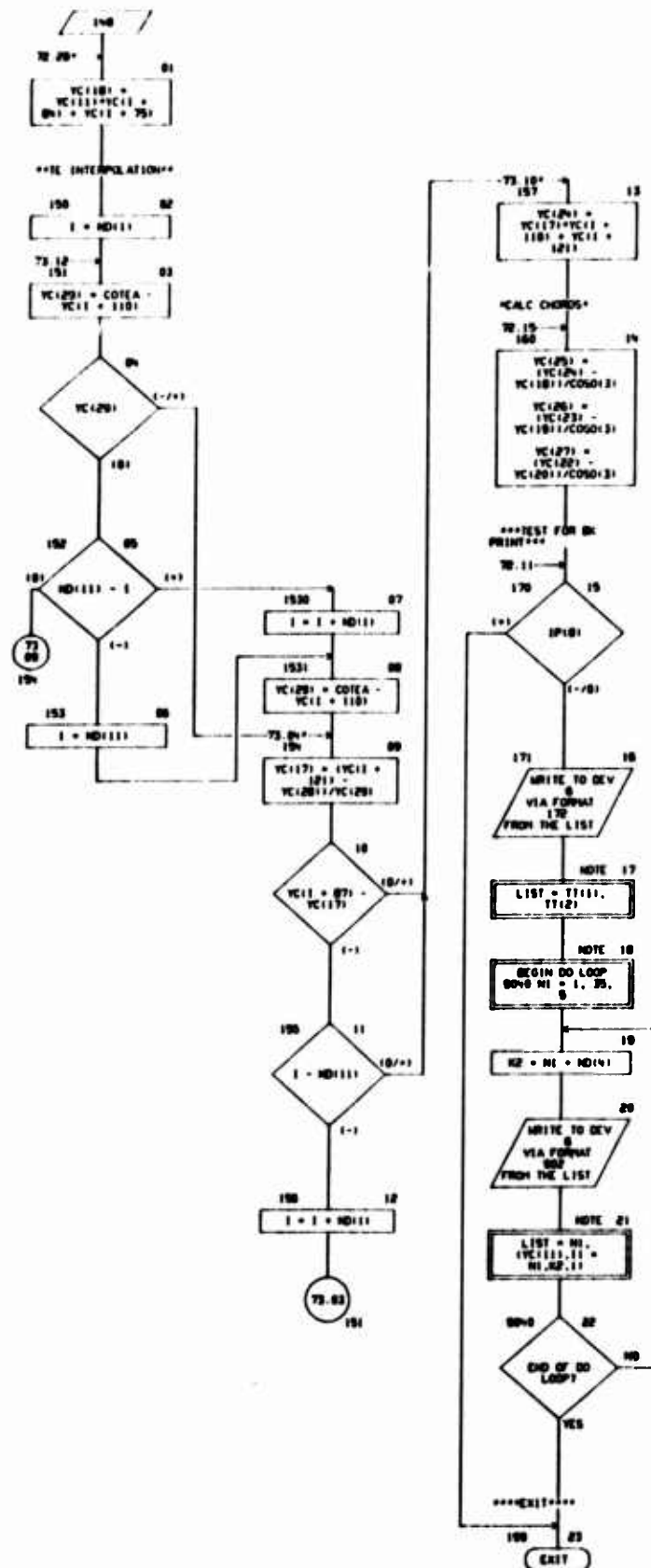


CHART TITLE - NON-PROCEDURAL STATEMENTS

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VC(150),TT(24),VTC(60),
TAND(9),CCLO(9),SIND(9),COSD(9)
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(TAND(1),T(1201)),(CCLO(1),T(131)),(SIND(1),T(1401)),
(COSD(1),T(1481)),
(ICDTEA,T(152))
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002 FORMAT(1H 14,9E10.0)

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OVERLAY (15,0)

FUEL, CONTENTS AND CONCENTRATED MASSES,
WEIGHT AND MASS PROPERTIES ANALYSIS

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PROGRAM TABLE OF CONTENTS AND
REFERENCES, AND TABLE OF DIAGNOSTICS

Preceding page blank

FORTRAN MODULE WING AND FEPPENAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

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(000020)	2.00 20	(000027)	2.07	(000027)	2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

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(000081)	5.10 402		
(000082)	5.11 403	(000080)	5.00
(000080)	5.13 500		
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(000113)	5.23 501		
(000120)	5.25 400		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MISCH:

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(000100)	0.16 0002		
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(000205)	0.21 105		
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(000233)	0.30 108	(000230)	0.37
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(000273)	0.14 111		
(000277)	0.15 112	(000192)	0.12
(000284)	0.19 1120	(000193)	0.13
(000280)	0.23	(000236)	0.40
(000291)	0.26 0004		
(000294)	0.29	(000291)	0.26
(000295)	0.32 0000	(000295)	0.32
(000290)	0.33 113		
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(000303)	0.37	(000404)	13.16
(000305)	0.30 114	(000305)	0.30
(000300)	0.40 115		
(000314)	10.02 116		

05/10/7-	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP							
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(000315)	10.03	117	(000313)	10.01						
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(000322)	10.09	9512								
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(000340)	10.18	1214	(000332)	10.15						
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(000368)	11.21	125								
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(000494)	13.21	133								
(000495)	13.22		(000537)	14.23						
(000500)	14.02	134								
(000504)	14.04	135								
(000505)	14.05	136	(000503)	14.03						
(000508)	14.07	9521								
(000509)	14.08	9522								
(000513)	14.08	9525	(000507)	14.05	(000508)	14.07				
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MISCIT

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 (000673) 18.04 140 (000669) 18.01
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 (000692) 18.13 1410
 (000697) 18.15 (001144) 27.17
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 (000711) 18.20 5505 (000707) 18.18
 (000713) 18.22 (000715) 18.23
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 (000734) 20.02 143
 (000773) 20.14 144 (000733) 20.01
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 (000778) 20.18 (000780) 20.19
 (000780) 20.19 1450
 (000786) 20.20 (000852) 21.21
 (000848) 21.13 146
 (000848) 21.15 147 (000839) 21.12
 (000849) 21.16 148 (000845) 21.14
 (000852) 21.21 149
 (000858) 21.23 1490
 (000875) 21.25 150 (000767) 20.13 (000773) 20.14 (000867) 21.22
 (000878) 21.26 (000835) 23.01
 (000880) 22.01 152 (000876) 21.26
 (000881) 22.02 153
 (000882) 22.03 154
 (000888) 22.04 155
 (000900) 22.09 156 (000876) 21.26 (000880) 22.01 (000881) 22.02
 (000901) 22.10 157
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 (000904) 22.13 1590
 (000906) 22.14 1501 (000902) 22.11
 (000909) 22.16 150
 (000910) 22.17 1501
 (000911) 22.18 160
 (000919) 22.20 1600 (000908) 22.15 (000909) 22.16
 (000922) 22.21 1601 (000918) 22.19
 (000931) 22.24 1600
 (000935) 23.01 161 (000900) 22.09 (000903) 22.12 (000930) 22.23
 (000942) 23.02 162
 (000943) 23.03 (001119) 27.05
 (000944) 23.04 163
 (000945) 23.05 (000946) 23.06
 (000946) 23.06 164
 (000950) 23.08 1640
 (000956) 23.11 165
 (000957) 23.12 166

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP				PAGE 4
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)				
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(001031)	24.23	183					
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(001041)	24.27	188					
(001043)	24.28	189					
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(001032)	24.30	184					
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(001048)	25.02	192					
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(001095)	26.20	1971					
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(001101)	26.23	1974					
(001102)	26.24	1975					
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(001144)	27.17	204					
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE COL

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(001258) 31.16 403	
(001265) 31.21 4030	
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(001276) 31.26 4030	
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(001278) 31.28 405	(001276) 31.26
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(001421) 35.07 4308	
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(001424) 35.09 431	
(001426) 35.11 435	(001425) 35.10

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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE FDIS

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(001634)	40.20	105	(001632)	40.18					
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(001650)	40.29	0012							
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(001694)	41.15	1121							
(001701)	41.18	1120							
(001702)	41.19	113							

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(001716)	41.28	119				
(001719)	41.29	120	(001715)	41.27		
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(001840)	43.39	133				
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(001847)	43.43	0002				
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(001913)	45.16	155				
(001902)	45.17	1502	(001913)	45.16		
(001924)	45.19	156				
(001916)	45.20	1500	(001913)	45.16		
(001917)	45.21		(001919)	45.22		

05/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 8
CARD 10	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO. AND PAGE/BOX	
(001010)	46.02	1501			
(001020)	46.01	157	(001023)	46.10	
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(002022)	47.23	183			
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(002107)	48.23		(002110)	48.25	
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(002115)	48.29		(002117)	48.31	
(002117)	48.31	187			
(002120)	48.32	009	(002058)	48.10	(002058) 48.11

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE T0FM11

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(002160)	52.03	181		
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05/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP	
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE C7012

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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PRTH

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CHART TITLE - NON-PROCEDURAL STATEMENTS

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1000017)	2.02	UNRECOGNIZED SYNTAX
1000025)	2.05	UNRECOGNIZED SYNTAX
1000000)	5.02	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000003)	5.14	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000102)	5.15	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
1000103)	5.16	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
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1000106)	5.19	UNDEF INED - 'WRITING' EXTERNAL REFERENCE
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PROGRAM FLOW CHARTS

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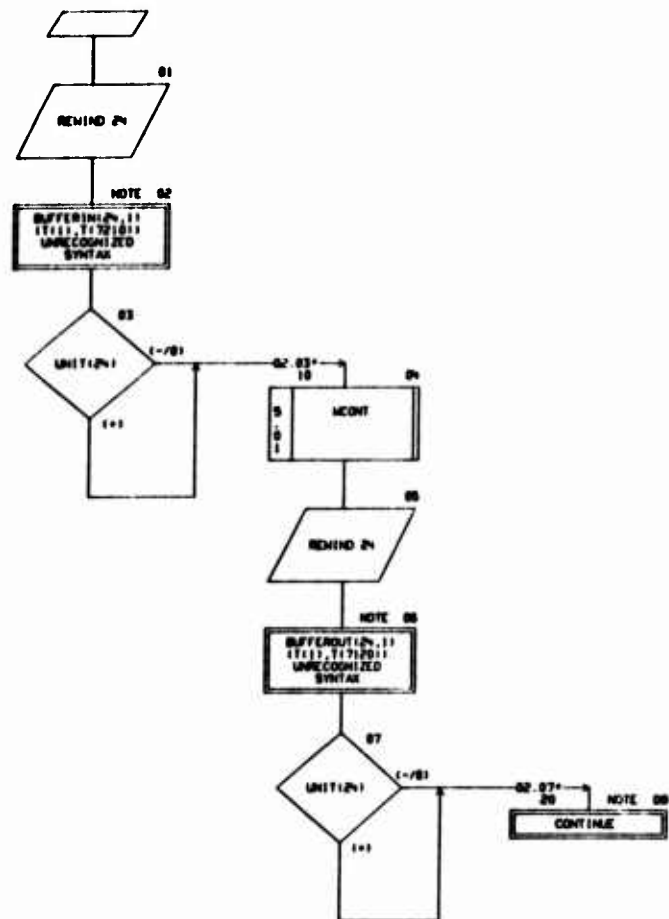
CHART TITLE - INTRODUCTORY COMMENTS

*****PROGRAM BLAVIS*****

PROGRAM FOR THIRD OVERLAY OF WING/EMPENNAGE MODULE

FUEL, CONTENTS, CONC MASS ITEMS - HEIGHT AND MASS PROPERTIES

CHART TITLE - PROCEDURES



06/10/79

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON-PROCEDURAL STATEMENTS

PROGRAM OLAY15
COMMON T171201
COMMON /MISC/ XM15C11001

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MCINT*****

FUEL, CONTENTS, CONC. MASS WEIGHT ESTIMATION CONTROL

CHART TITLE - SUBROUTINE MCONT

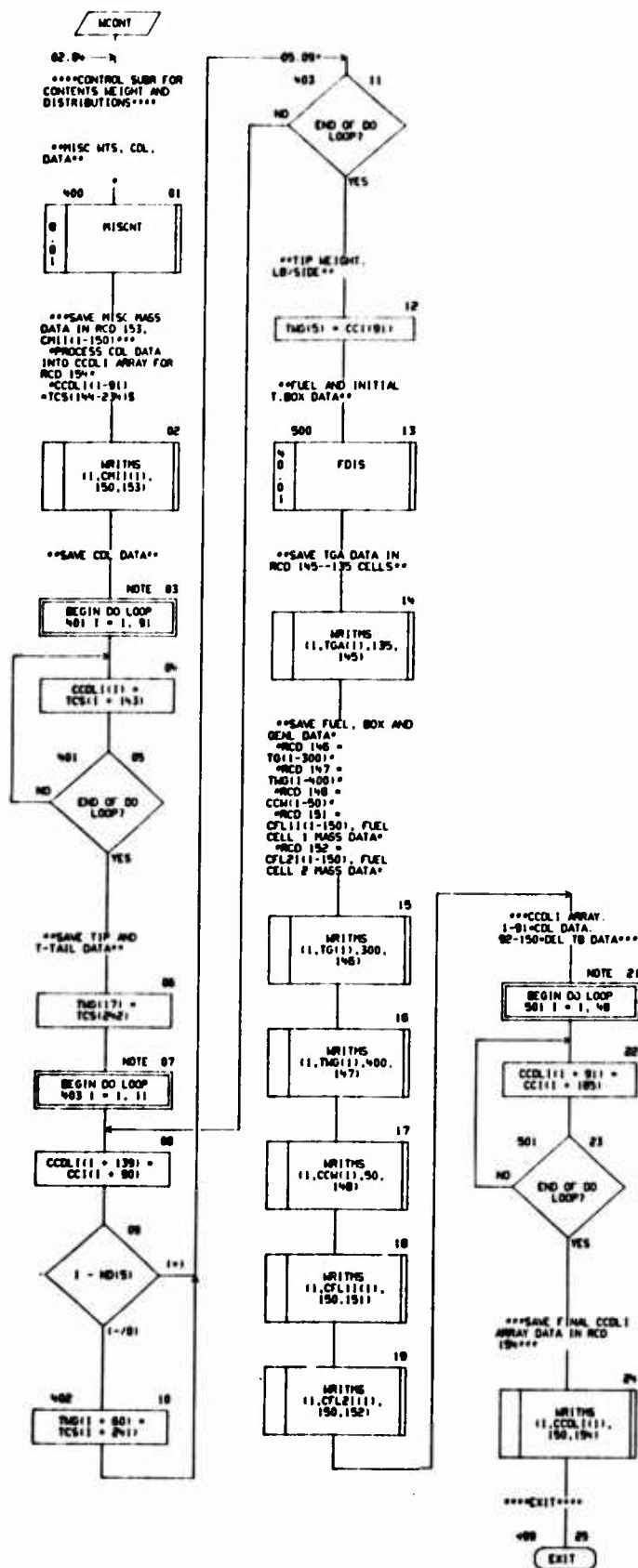


CHART TITLE - NON-PROCEDURAL STATEMENTS

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CH(1150),CFL(1150),CFL2(1150)
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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MISCH*****

MISC CONTENT HEIGHT/DISTRIBUTION EVAL/CONTROL

CHART TITLE - SUBROUTINE MISCHT

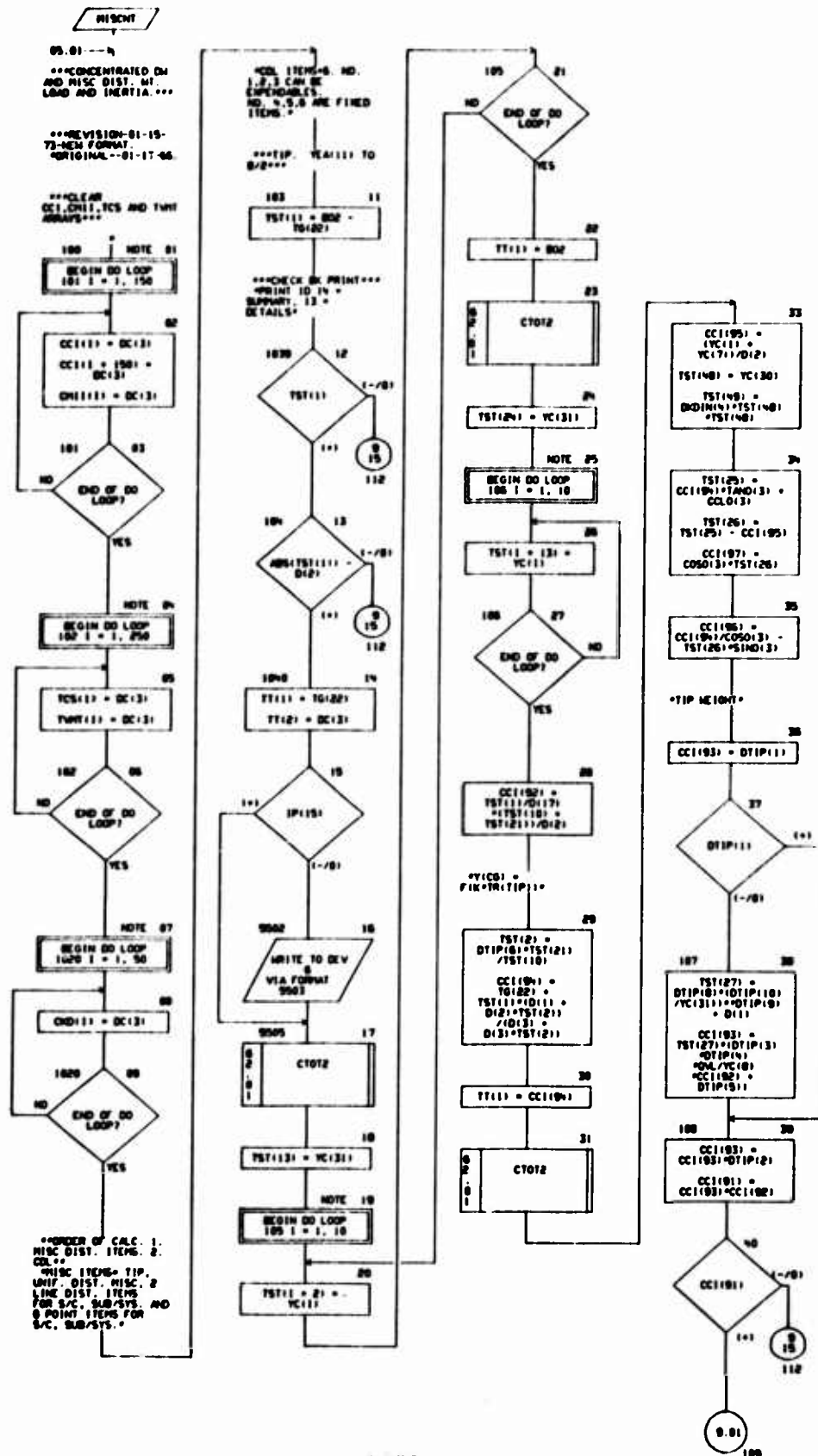


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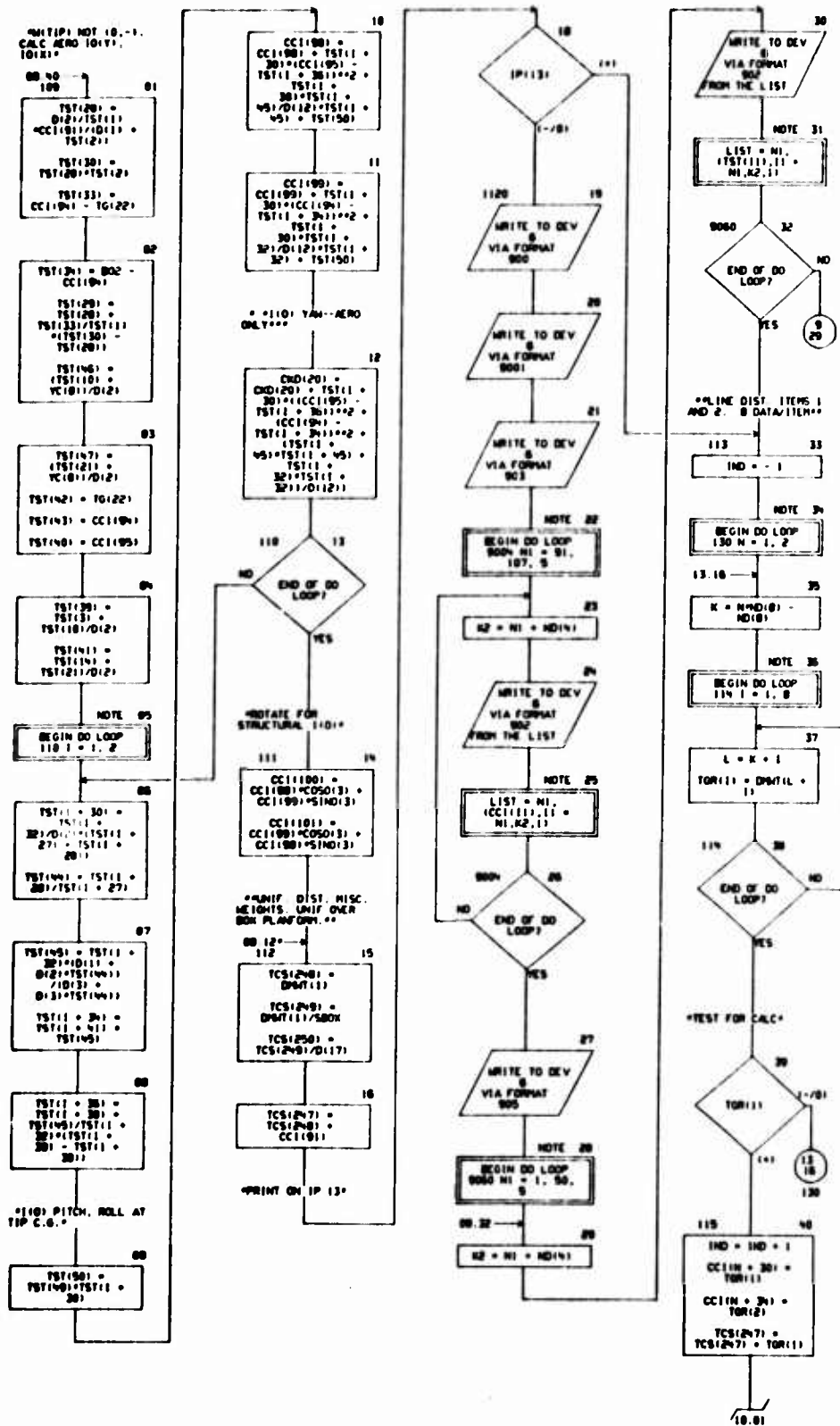
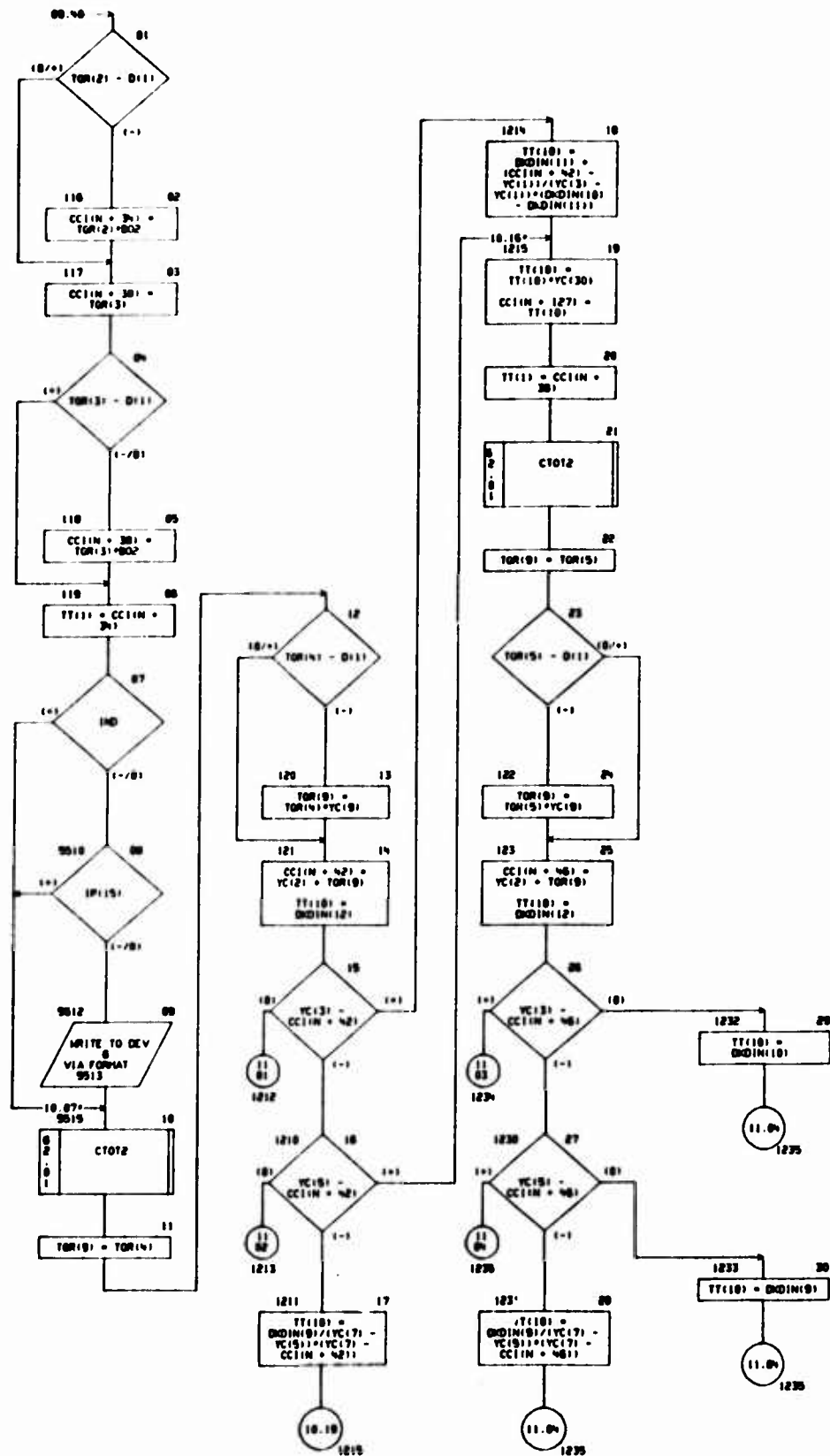


CHART TITLE - SUBROUTINE NISCHT



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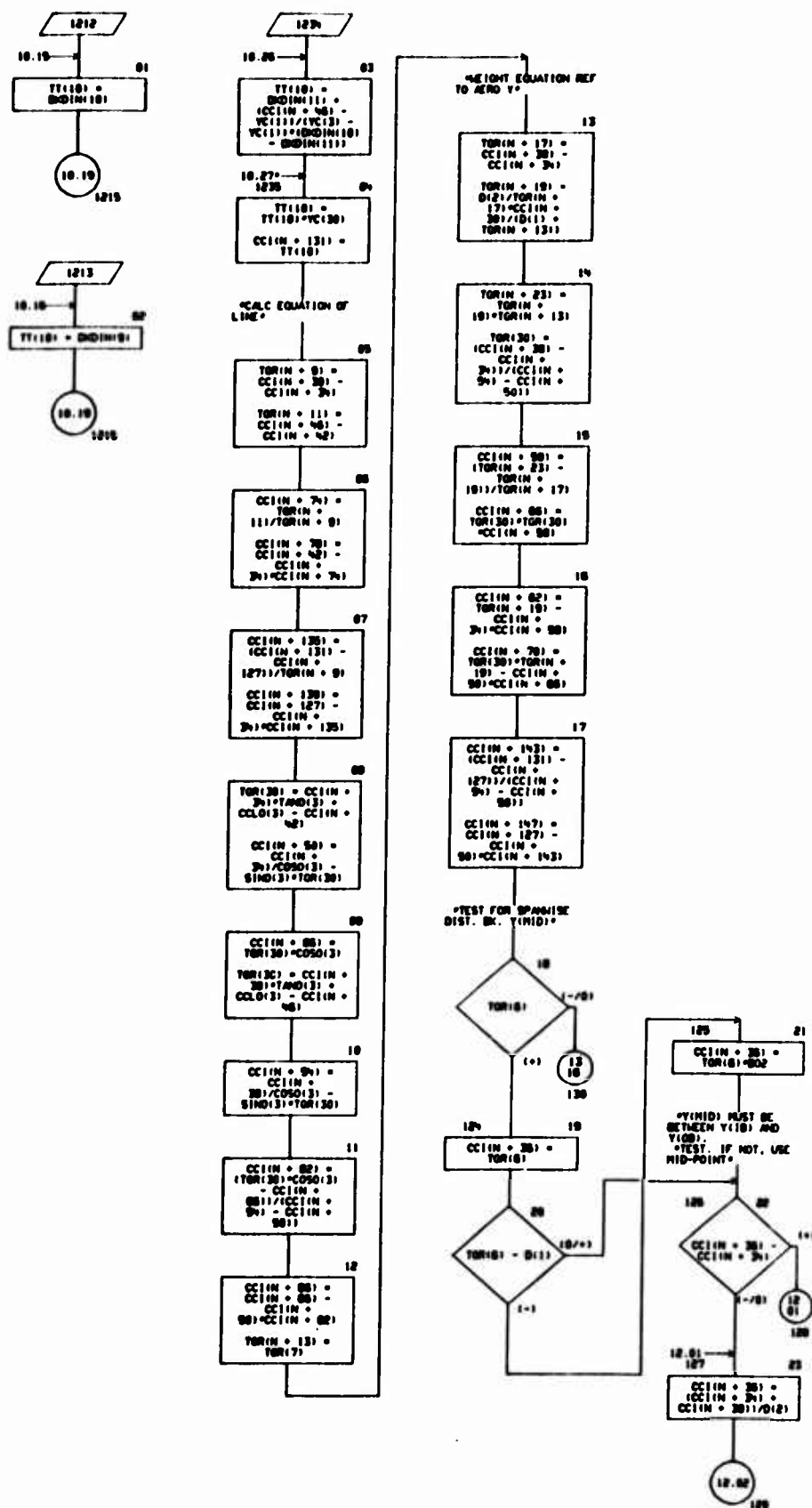


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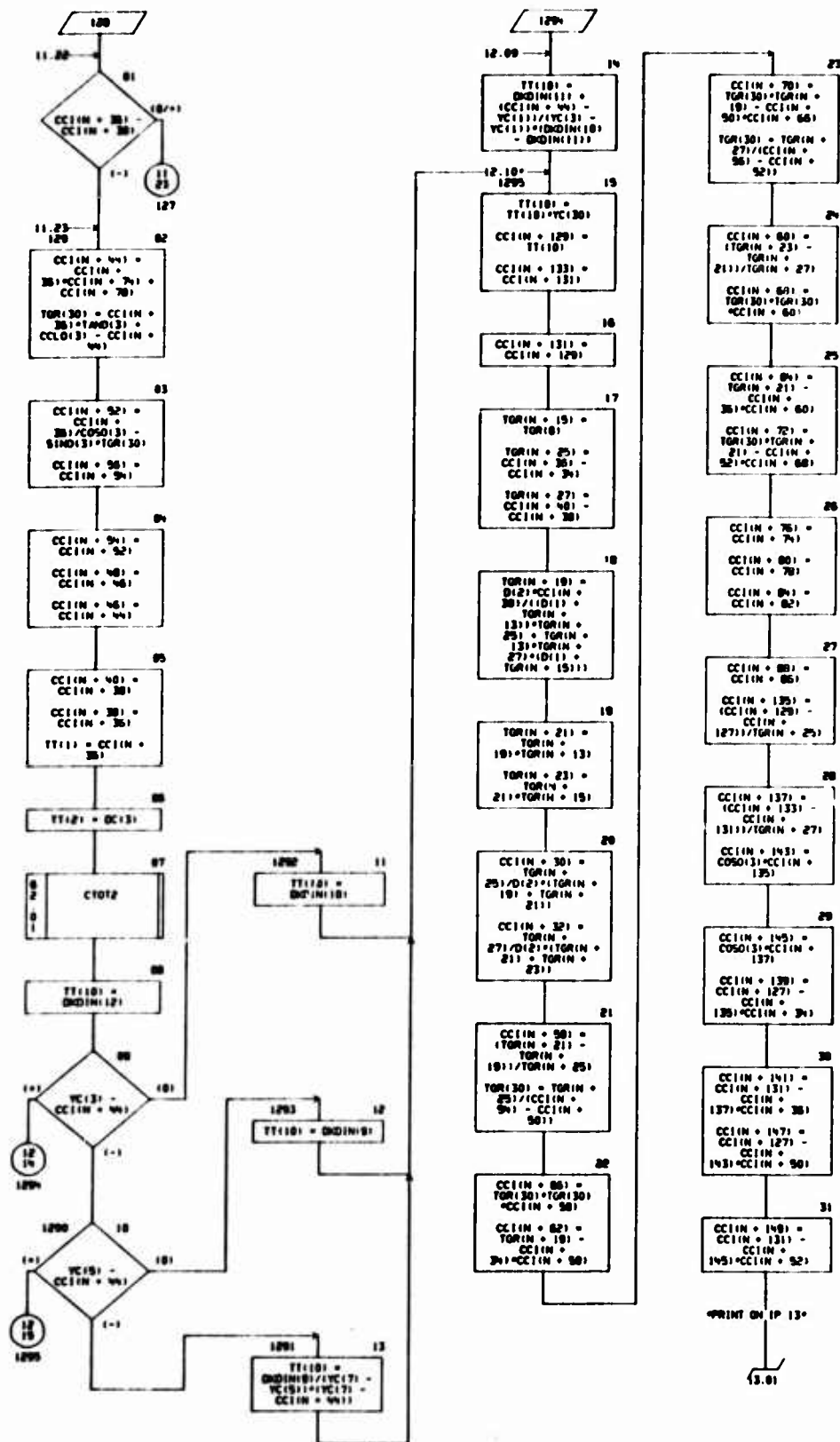
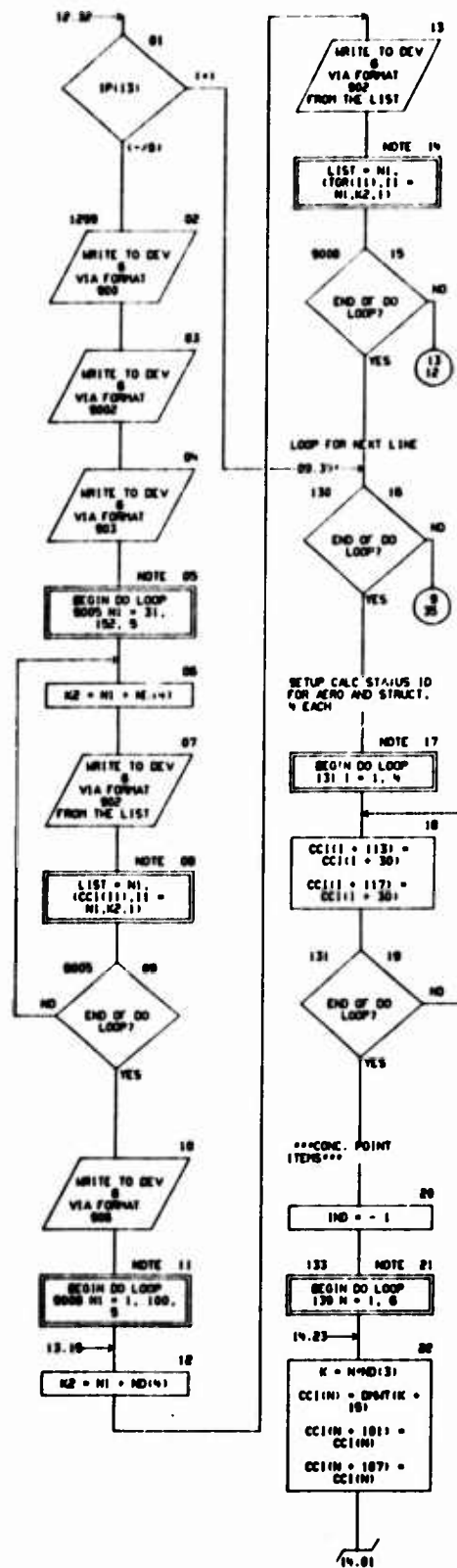


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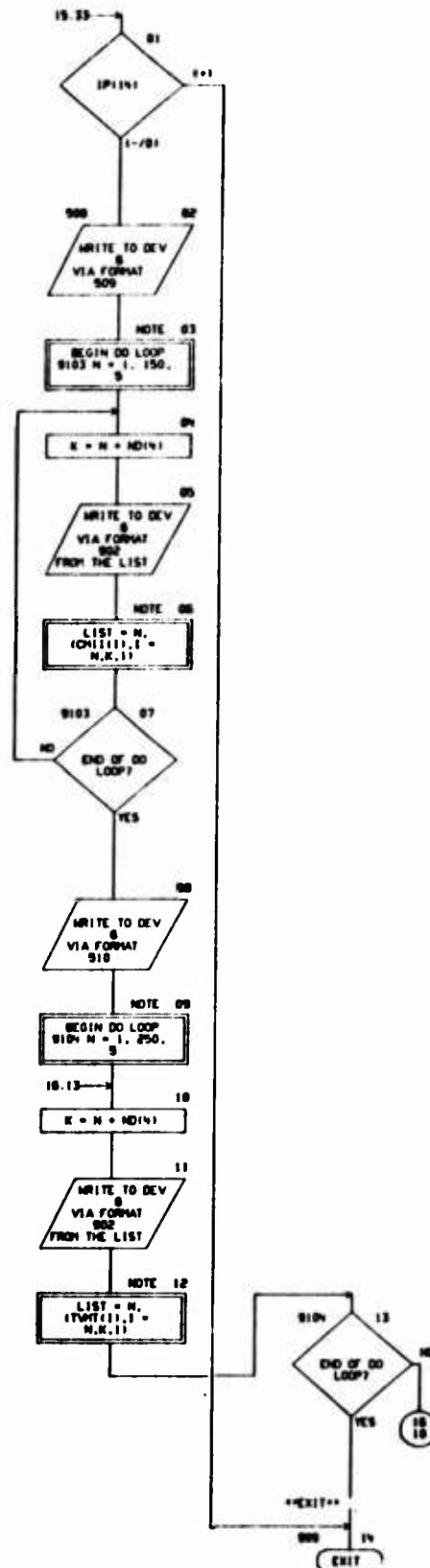


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
TG(300),TNG(400),CC(1300),TCS(250),CHI(1150),TST(50),TT(24),
YC(150),TAND(9),CCLO(9),SIND(6),COSD(6),TGR(100),TBM(11),TGA(135),
DHW(35),DCDL(100),DTIP(15),TWMT(250),DKDIN(15),CKD(50)
EQUIVALENCE (D(1),T(206)),(CD(1),T(412)),(ND(1),T(612)),
(DC(1),D(140)),(TG(1),T(100)),(TNG(1),T(130)),(TST(1),T(170)),
(YC(1),T(20)),(TT(1),T(41)),(CC(1),CD(105)),(TCS(1),CD(140)),
(CHI(1),CD(175)),(TGR(1),T(175)),(TAND(1),T(193)),(CCLO(1),T(193)),
(TAND(1),T(122)),(CCLO(1),T(131)),(SIND(1),T(140)),(COSD(1),T(140)),
(COSD(1),T(140)),(COTEA,T(152)),(BOZ,T(12)),(BS102,T(15)),
(CTIP,T(27)),(SBOX,TG(93)),(TBM(1),TG(266)),(TGA(1),T(105)),
(DTIP(1),D(195)),(DHW(1),D(182)),(DCDL(1),D(185)),
(DKDIN(1),D(1970)),(DKDIN(1),D(1970)),(CKD(1),CD(195)),
(I,ND(26)),(N,ND(27)),(L,ND(28)),(K,ND(30)),(M,ND(31)),(J,ND(29)),
(TWMT(1),CD(15))
900  FORMAT (60H) ***MISCNT SUBR--MISC CONTENT MTS--CCI, TST, TGR ARRAYS***,20X,21H** MISCNT - (P(1)) **
902  FORMAT (1H 14,5E10.0)
903  FORMAT (6H0 CCI )
905  FORMAT (6H0 TST )
906  FORMAT (6H0 TGR )
9503  FORMAT(1H1,60X,41H** CTO12 (CALLED FROM MISCNT) - IP(15) **)
9001  FORMAT (35H0 **TIP DATA. TST AND CC(191-107**))
9513  FORMAT(1H1,57X,52H** CTO12 (CALLED FROM MISCNT - LOOP 130) - IP(15) **)
9002  FORMAT (3H0 **DIST LINE DATA. TGR AND CCI )
9523  FORMAT(1H1,57X,52H** CTO12 (CALLED FROM MISCNT - LOOP 130) - IP(15) **)
9003  FORMAT (3H0 **CONC ITEM DATA. TGR AND CCI )
909  FORMAT (49H) ***MISCNT SUBR. FINAL CHIE AND TWMT ARRAYS***,
      40X,21H** MISCNT - (P(14)) **/6H0 CHIE)
910  FORMAT (6H0 TWMT)

```


CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MISCIT*****

MISC CONTENT WEIGHT INTEGRATION

CHART TITLE - SUBROUTINE MISC11

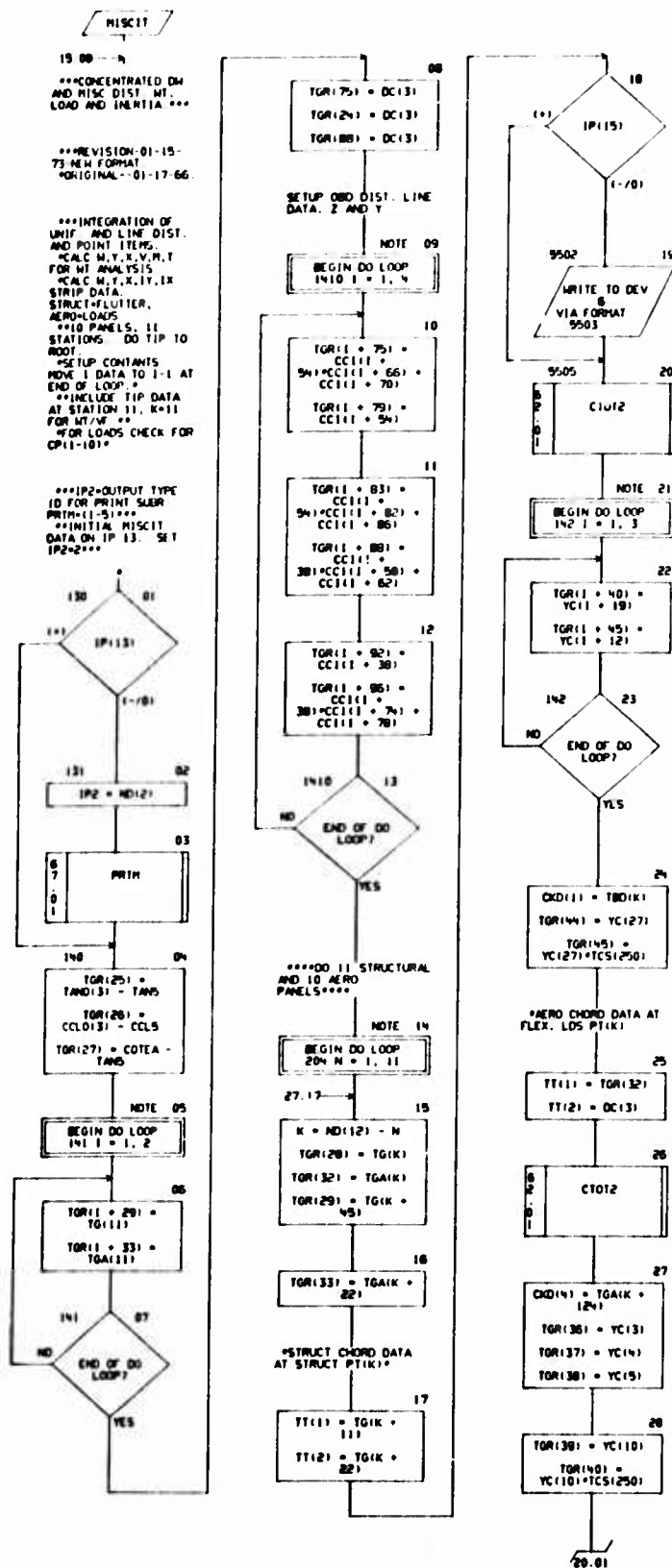


CHART TITLE - SUBROUTINE MISC11

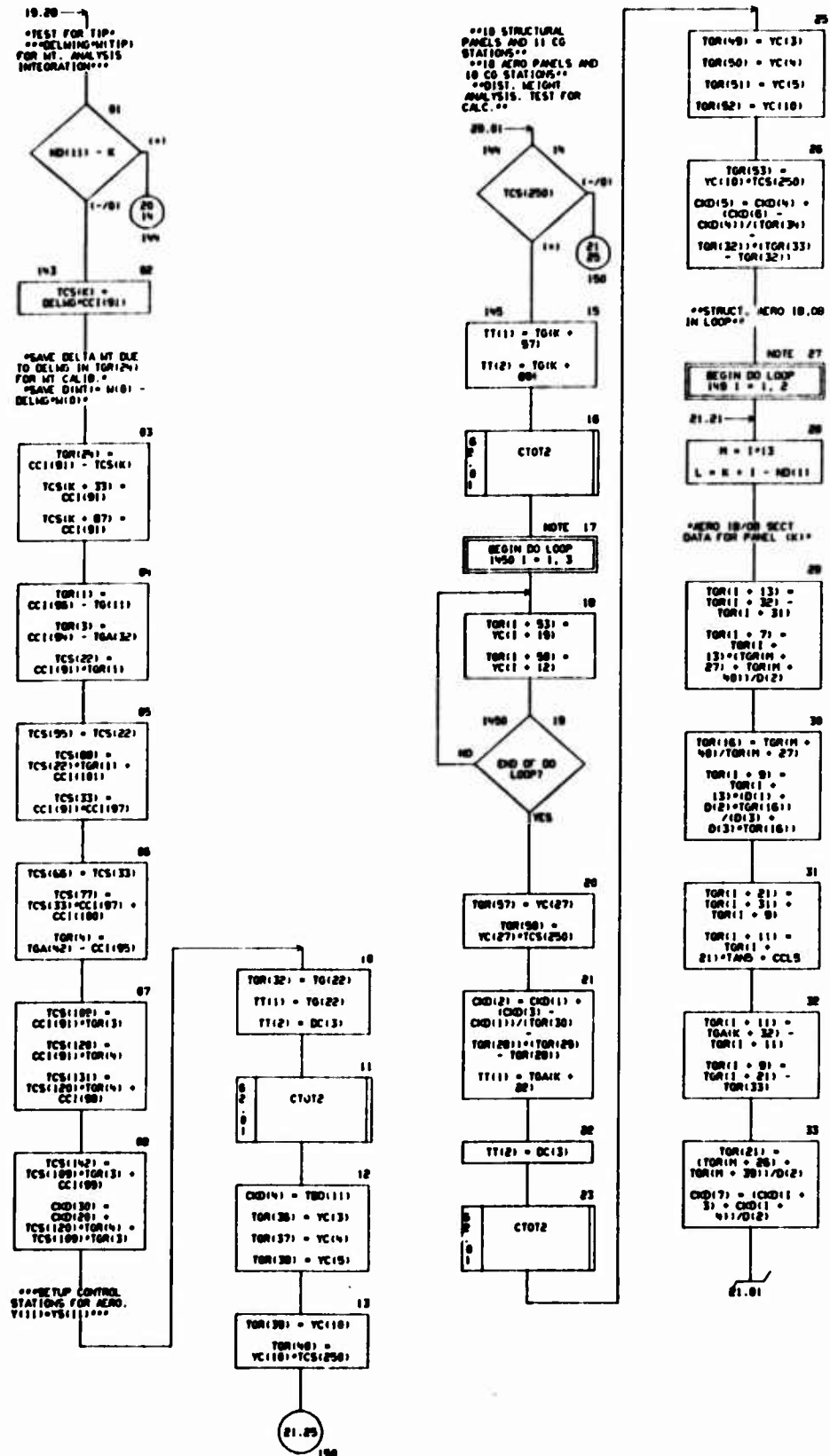


CHART TITLE - SUBROUTINE MISCL

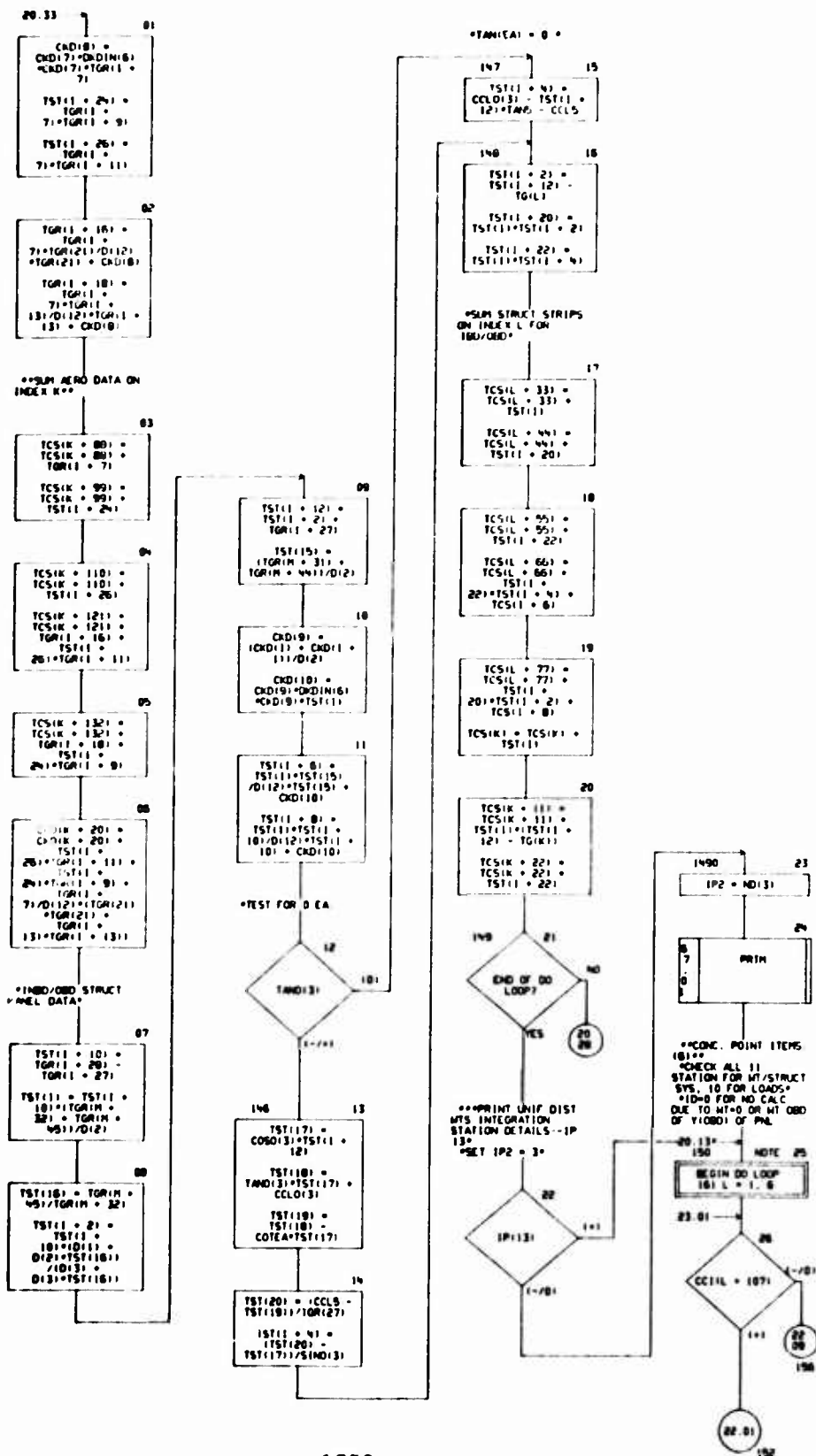
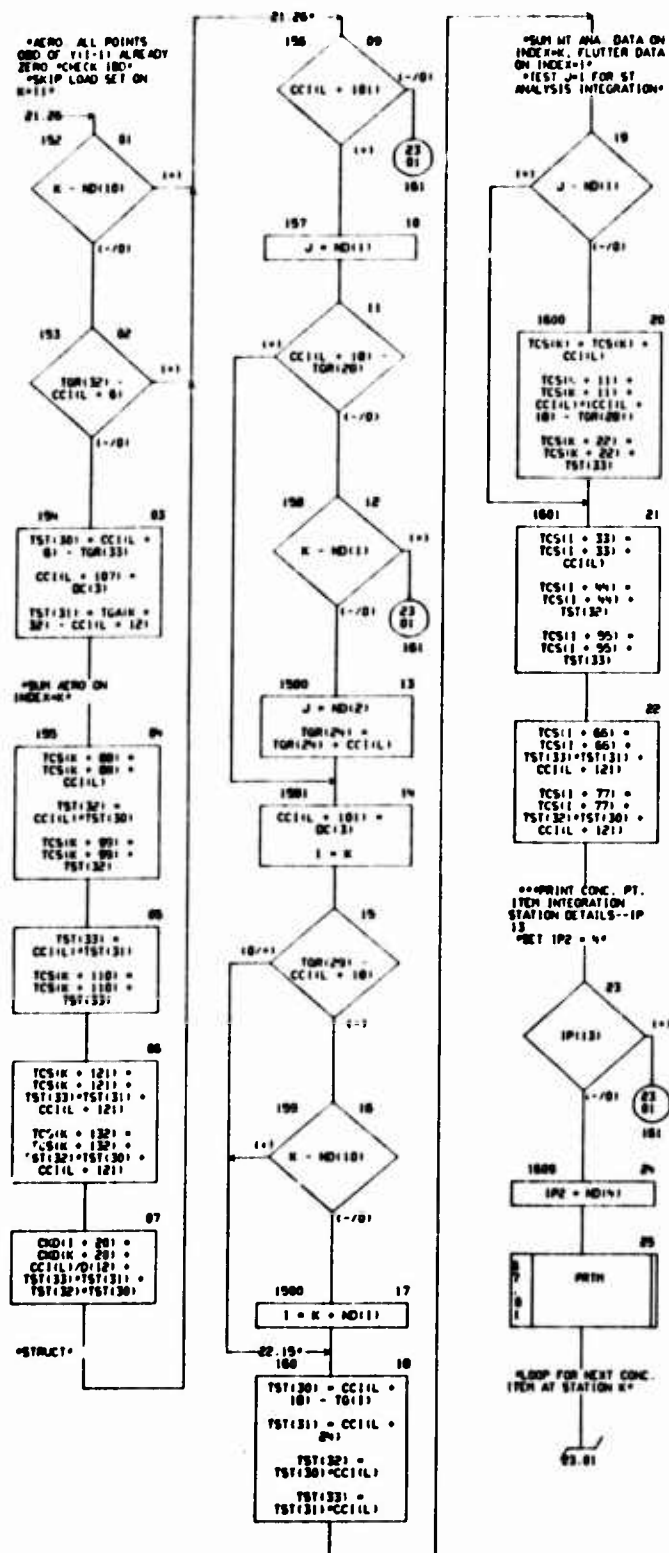
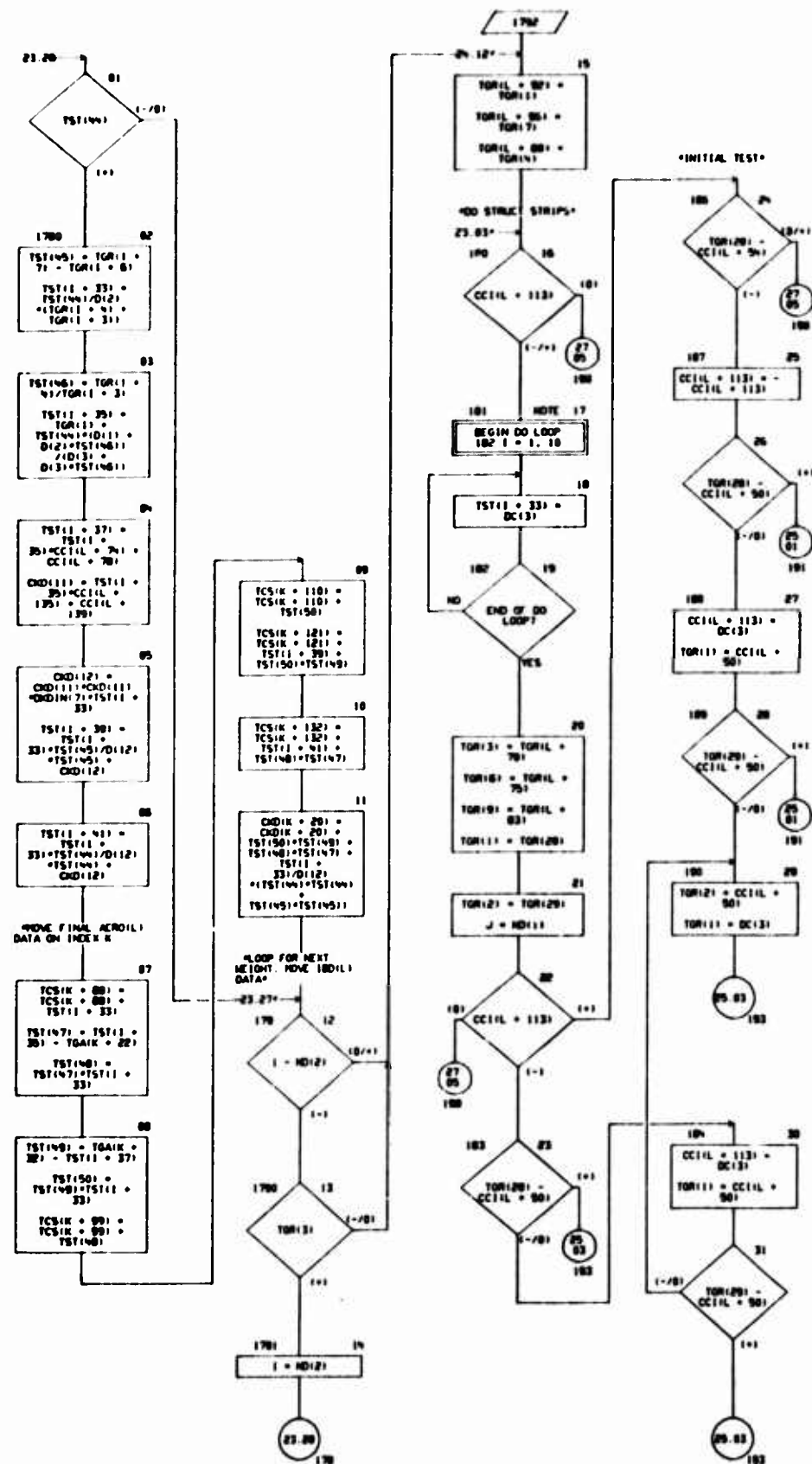


CHART TITLE - SUBROUTINE MISC11



[illegible]

CHART TITLE - SUBROUTINE MISC11



```

graph TD
    101[101] --> 102{102}
    102 --> 103{103}
    103 --> 104[104]
    104 --> 105[105]
    105 --> 106{106}
    106 --> 107[107]
    107 --> 108[108]
    108 --> 109{109}
    109 --> 110[110]
    110 --> 111{111}
    111 --> 112[112]
    112 --> 113{113}
    113 --> 114[114]
    114 --> 115{115}
    115 --> 116[116]
    116 --> 117{117}
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    118 --> 119{119}
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    120 --> 121{121}
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    122 --> 123{123}
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    150 --> 151{151}
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    225 --> 226[226]
    226 --> 227{227}
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    230 --> 231{231}
    231 --> 232[232]
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    238 --> 239{239}
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    270 --> 271{271}
    271 --> 272[272]
    272 --> 273{273}
    273 --> 274[274]
    274 --> 275{275}
    275 --> 276[276]
    276 --> 277{277}
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    280 --> 281{281}
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    282 --> 283{283}
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    286 --> 287{287}
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    290 --> 291{291}
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    294 --> 295{295}
    295 --> 296[296]
    296 --> 297{297}
    297 --> 298[298]
    298 --> 299{299}
    299 --> 300[300]
    300 --> 301{301}
    301 --> 302[302]
    302 --> 303{303}
    303 --> 304[304]
    304 --> 305{305}
    305 --> 306[306]
    306 --> 307{307}
    307 --> 308[308]
    308 --> 309{309}
    309 --> 310[310]
    310 --> 311{311}
    311 --> 312[312]
    312 --> 313{313}
    313 --> 314[314]
    314 --> 315{315}
    315 --> 316[316]

```



```

graph TD
    01{01} -- 1 --> 02[02]
    02 -- 1000 --> 03[03]
    03 -- 1000 --> 04[04]
    04 -- 1000 --> 05[05]
    05 -- 1000 --> 06[06]
    06 -- 1000 --> 07[07]
    07 -- 1000 --> 08{08}
    08 -- 1 --> 09[09]
    09 -- 1000 --> 10{10}
    10 -- 1 --> 11[11]
    11 -- 1000 --> 12[12]
    12 -- 1000 --> 13[13]
    13 -- 1000 --> 14[14]
    14 -- 1000 --> 15[15]
    15 -- 1000 --> 16[16]
    16 -- 1000 --> 17[17]
    17 -- 1000 --> 18{18}
    18 -- 1 --> 19[19]
    19 -- 1000 --> 20{20}
    20 -- 1 --> 21[21]
    21 -- 1000 --> 22{22}
    22 -- 1 --> 23[23]
    23 -- 1000 --> 24{24}
    24 -- 1000 --> 25[25]
    25 -- 1000 --> 26[26]
    26 -- 1000 --> 27[27]
    27 -- 1000 --> 28[28]
    28 -- 1000 --> 29[29]
    29 -- 1000 --> 30[30]
    30 -- 1000 --> 31[31]
    31 -- 1000 --> 32[32]
    32 -- 1000 --> 33[33]
    33 -- 1000 --> 34[34]
    34 -- 1000 --> 35[35]
    35 -- 1000 --> 36[36]
    36 -- 1000 --> 37[37]
    37 -- 1000 --> 38[38]
    38 -- 1000 --> 39[39]
    39 -- 1000 --> 40[40]
    40 -- 1000 --> 41[41]
    41 -- 1000 --> 42[42]
    42 -- 1000 --> 43[43]
    43 -- 1000 --> 44[44]
    44 -- 1000 --> 45[45]
    45 -- 1000 --> 46[46]
    46 -- 1000 --> 47[47]
    47 -- 1000 --> 48[48]
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    49 -- 1000 --> 50[50]
    50 -- 1000 --> 51[51]
    51 -- 1000 --> 52[52]
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    54 -- 1000 --> 55[55]
    55 -- 1000 --> 56[56]
    56 -- 1000 --> 57[57]
    57 -- 1000 --> 58[58]
    58 -- 1000 --> 59[59]
    59 -- 1000 --> 60[60]
    60 -- 1000 --> 61[61]
    61 -- 1000 --> 62[62]
    62 -- 1000 --> 63[63]
    63 -- 1000 --> 64[64]
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    66 -- 1000 --> 67[67]
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    68 -- 1000 --> 69[69]
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    71 -- 1000 --> 72[72]
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    73 -- 1000 --> 74[74]
    74 -- 1000 --> 75[75]
    75 -- 1000 --> 76[76]
    76 -- 1000 --> 77[77]
    77 -- 1000 --> 78[78]
    78 -- 1000 --> 79[79]
    79 -- 1000 --> 80[80]
    80 -- 1000 --> 81[81]
    81 -- 1000 --> 82[82]
    82 -- 1000 --> 83[83]
    83 -- 1000 --> 84[84]
    84 -- 1000 --> 85[85]
    85 -- 1000 --> 86[86]
    86 -- 1000 --> 87[87]
    87 -- 1000 --> 88[88]
    88 -- 1000 --> 89[89]
    89 -- 1000 --> 90[90]
    90 -- 1000 --> 91[91]
    91 -- 1000 --> 92[92]
    92 -- 1000 --> 93[93]
    93 -- 1000 --> 94[94]
    94 -- 1000 --> 95[95]
    95 -- 1000 --> 96[96]
    96 -- 1000 --> 97[97]
    97 -- 1000 --> 98[98]
    98 -- 1000 --> 99[99]
    99 -- 1000 --> 100[100]
    
```

Flowchart of the TSP program, showing the sequence of operations from input to output. The flowchart is divided into two main sections: the left section (lines 01-07) handles the initial setup and data input, while the right section (lines 08-24) performs the iterative calculations and output. The flow starts at line 01 with a decision diamond (01) and proceeds through various assignment and decision blocks, eventually leading to the final output at line 24.

```

graph TD
    subgraph Path_01 [01]
        1970[1970] --> 01[01]
        01 --> TORIL[TORIL = 70) = TOR(1)]
        TORIL --> TORIL[TORIL = 75) = TOR(4)]
        TORIL --> TORIL[TORIL = 83) = TOR(7)]
        TORIL --> PRINT[**PRINT DIST. LINE  
INTEGRATION STATION  
DETAILS--IP 13**]
        PRINT --> SETIP[SET IP2=0]
        SETIP --> IP13{IP(13)}
        IP13 -- NO --> 1970
        IP13 -- YES --> 03[03]
        03 --> IP2[IP2 = ND(5)]
        IP2 --> PATH[PATH]
        PATH --> LOOP01[**LOOP FOR NEXT  
LINE DATA**]
        LOOP01 --> END01{END OF DO  
LOOP?}
        END01 -- YES --> 05((05))
        END01 -- NO --> 09[09]
        09 --> ND11[ND(11) = 0]
        ND11 -- NO --> 07[07]
        ND11 -- YES --> 01
        07 --> CC11[CC(170) = TCS(1)]
        CC11 --> CC11[CC(180) = TCS(22)]
        CC11 --> CC11[CC(190) = TCS(33)]
        CC11 --> 00
    end

    subgraph Path_00 [00]
        200[200] --> 00[00]
        00 --> CC11K[CC(11K = 180) =  
CC(11K = 180) =  
TCS(1K)]
        CC11K --> CC11K[CC(11K = 190) =  
CC(11K = 191) =  
TCS(1K = 22)]
        CC11K --> 09[09]
        09 --> CC11K[CC(11K = 170) =  
CC(11K = 180) =  
TCS(1K = 11)]
        CC11K --> CC11K[CC(11K = 100) =  
TCS(1K = 11) =  
TOR(11)]
        CC11K --> 100[100]
        100 --> DATA[**ONE DATA TO 1-1  
LOC**]
        DATA --> 201[201]
        201 --> BEGIN00[BEGIN DO LOOP  
202 1 = 1, 2]
        BEGIN00 --> 11[11]
        11 --> TOR1[TOR(1 = 20) =  
TOR(1 = 27)]
        TOR1 --> TOR1[TOR(1 = 31) =  
TOR(1 = 31)]
        TOR1 --> 12[12]
        12 --> END00{END OF DO  
LOOP?}
        END00 -- YES --> 13[13]
        END00 -- NO --> 11
        13 --> CHD1[CHD(3) = CHD(1)]
        CHD1 --> CHD1[CHD(6) = CHD(4)]
        CHD1 --> 14[14]
        14 --> BEGIN00[BEGIN DO LOOP  
203 1 = 1, 13]
        BEGIN00 --> 19[19]
        19 --> TOR1[TOR(1 = 81) =  
TOR(1 = 35)]
        TOR1 --> 16[16]
        16 --> END00{END OF DO  
LOOP?}
        END00 -- YES --> 17[17]
        END00 -- NO --> 19
        17 --> LOOP00[**LOOP FOR NEXT  
PAGE**]
        LOOP00 --> 204[204]
        204 --> END00{END OF DO  
LOOP?}
        END00 -- YES --> 18((18))
        END00 -- NO --> 17
        18 --> SCALE00[**SCALE PAGE DATA  
TO READ MT**]
        SCALE00 --> 200
    end

    subgraph Path_10 [10]
        210[210] --> 10[10]
        10 --> TCS1[TCS(140) =  
TCS(247) =  
TCS(140) =  
TCS(247) =  
TCS(144) =  
TCS(247) =  
TOR(24)]
        TCS1 --> TCS1[TCS(147) = TCS(1)]
        TCS1 --> 18[18]
        18 --> TCS1[TCS(140) =  
TCS(24)]
        TCS1 --> TCS1[TCS(140) =  
TCS(80)]
        TCS1 --> 20[20]
        20 --> BEGIN10[BEGIN DO LOOP  
211 1 = 1, 10]
        BEGIN10 --> 21[21]
        21 --> TCS1[TCS(147) =  
TCS(147) =  
TCS(1) = 1]
        TCS1 --> TCS1[TCS(140) =  
TCS(140) =  
TCS(1) = 30]
        TCS1 --> TCS1[TCS(140) =  
TCS(140) =  
TCS(1) = 80]
        TCS1 --> 211[211]
        211 --> END10{END OF DO  
LOOP?}
        END10 -- YES --> 23[23]
        END10 -- NO --> 21
        23 --> BEGIN10[BEGIN DO LOOP  
213 1 = 1, 3]
        BEGIN10 --> 2727[27,27]
        2727 --> 24[24]
        24 --> TCS1[TCS(1 = 140) =  
D(1)]
        TCS1 --> 25[25]
        25 --> TCS1[TCS(1 = 140)]
        TCS1 --> 101[101]
        101 --> 111[111]
        111 --> 212[212]
        212 --> TCS1[TCS(1 = 140) =  
TCS(1) =  
143/TCS(1 = 140)]
        TCS1 --> 213[213]
        213 --> END10{END OF DO  
LOOP?}
        END10 -- YES --> 27((27))
        END10 -- NO --> 213
        27 --> SCALE10[**SCALE ALL PAGE  
DATA**]
        SCALE10 --> 201
    end

```

CHART TITLE - SUBROUTINE MISC11

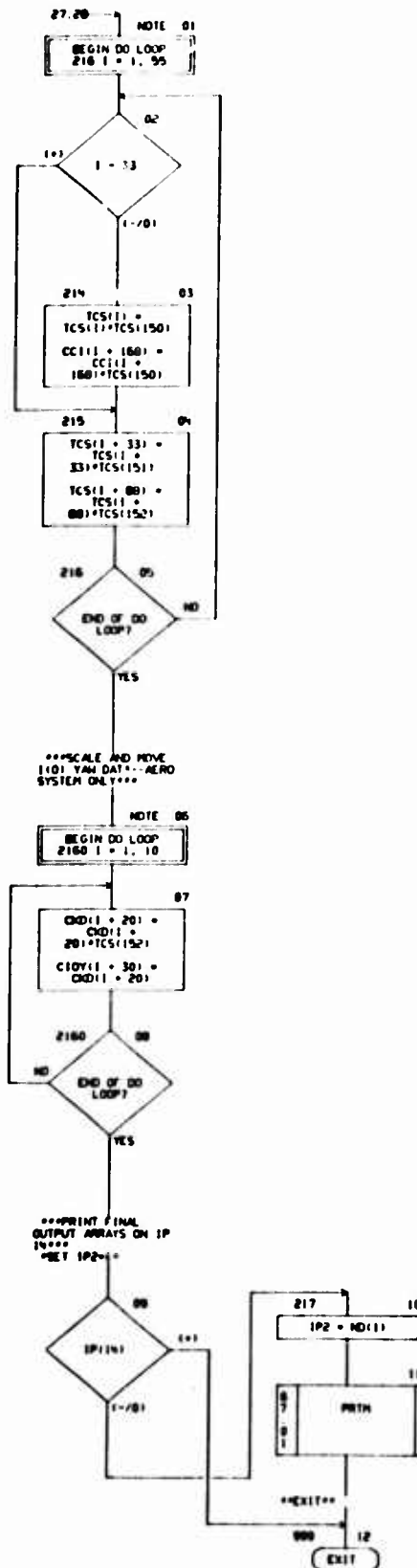


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2050),CD(2000),ND(100),DC(100),
TG(300),TAG(400),CC(300),TCS(250),CHI(150),TS(50),TT(24),
YC(150),TAND(8),CCLO(8),SIND(6),COSO(6),TGR(10),TBM(11),TGA(135),
TBD(11),
C10Y(150),
BPM(35),DCDL(100),DTIP(15),          DKOIN(5),CKD(50)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(TAG(1),T(1301)),(TS(1),T(1701)),
(YC(1),T(201)),(TT(1),T(411)),(CC(1),CD(1651)),(TCS(1),CD(1401)),
(CHI(1),CD(1251)),(TGR(1),T(1751)),(TAG(1),T(921)),(CCLO(1),T(931)),
(TAND(1),T(122)),(CCLO(1),T(131)),(SIND(1),T(140)),(COSO(1),T(146)),
(COTE(1),T(152)),(BO2(1),T(121)),(B5102(1),T(151)),
(CTIP(1),T(371)),(SBOX(1),T(931)),(TBM(1),T(266)),(TGA(1),T(1851)),
(DTIP(1),D(19551)),(BPM(1),D(18201)),(DCDL(1),D(18951)),
(DKOIN(1),D(19701)),(DKIN(1),D(1271)),(CKD(1),CD(1951)),
(I(1),ND(261)),(N(1),ND(271)),(L(1),ND(281)),(K(1),ND(301)),(M(1),ND(311)),(J(1),ND(291)),
(TBD(1),T(1277)),(DCDL(1),T(1871)),
(IP2(1),ND(331)),
(C10Y(1),T(1501))
9503  FORMAT(1M),60X,NIM** C10T2 (CALLED FROM MISC17) - IP(15) **

```

06/10/74

AUTOFLOW CHART SET - SLEEP WING AND EMPLOYMENT MODULE - PAGE 30

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE CDL*****

***EXTERNAL CONCENTRATED DEADWEIGHT EVALUATION**

CHART TITLE - SUBROUTINE COL

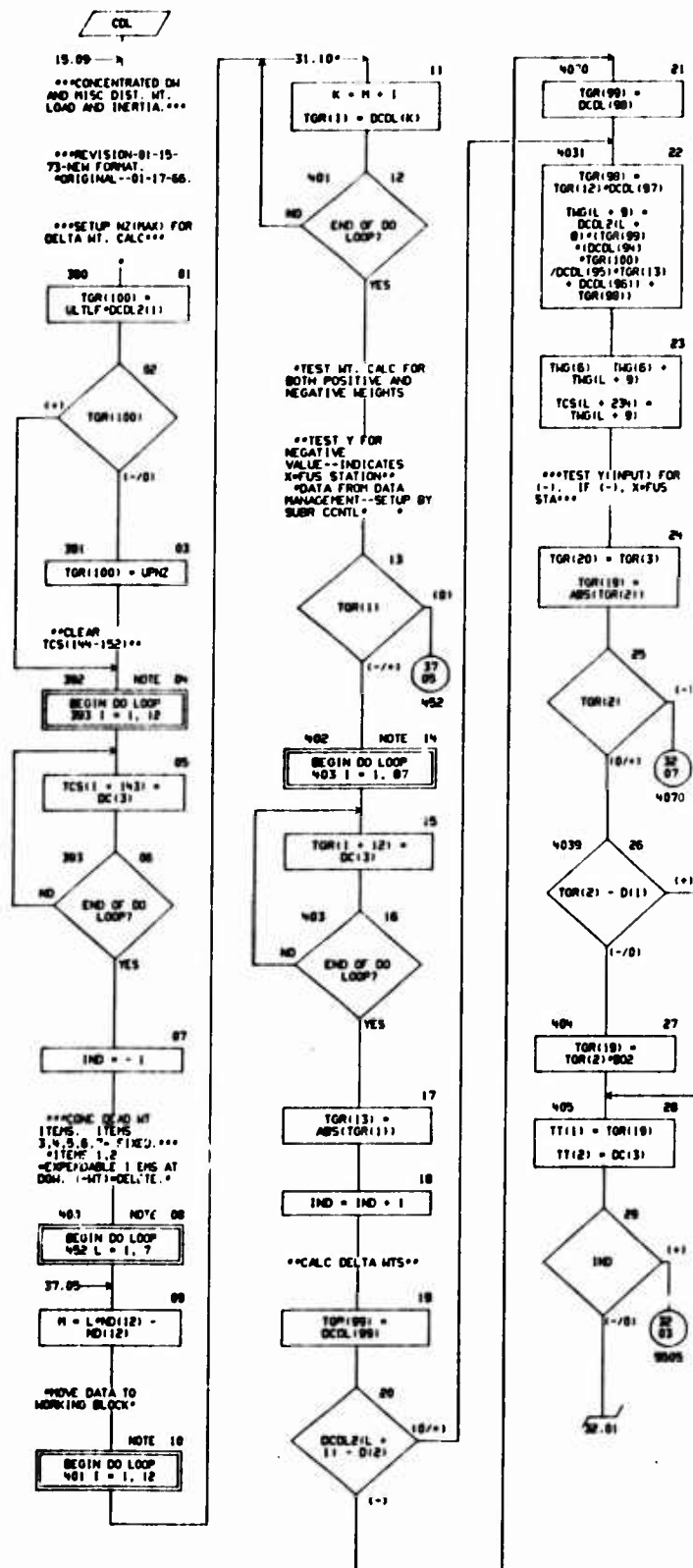


CHART TITLE - SUBROUTINE C01

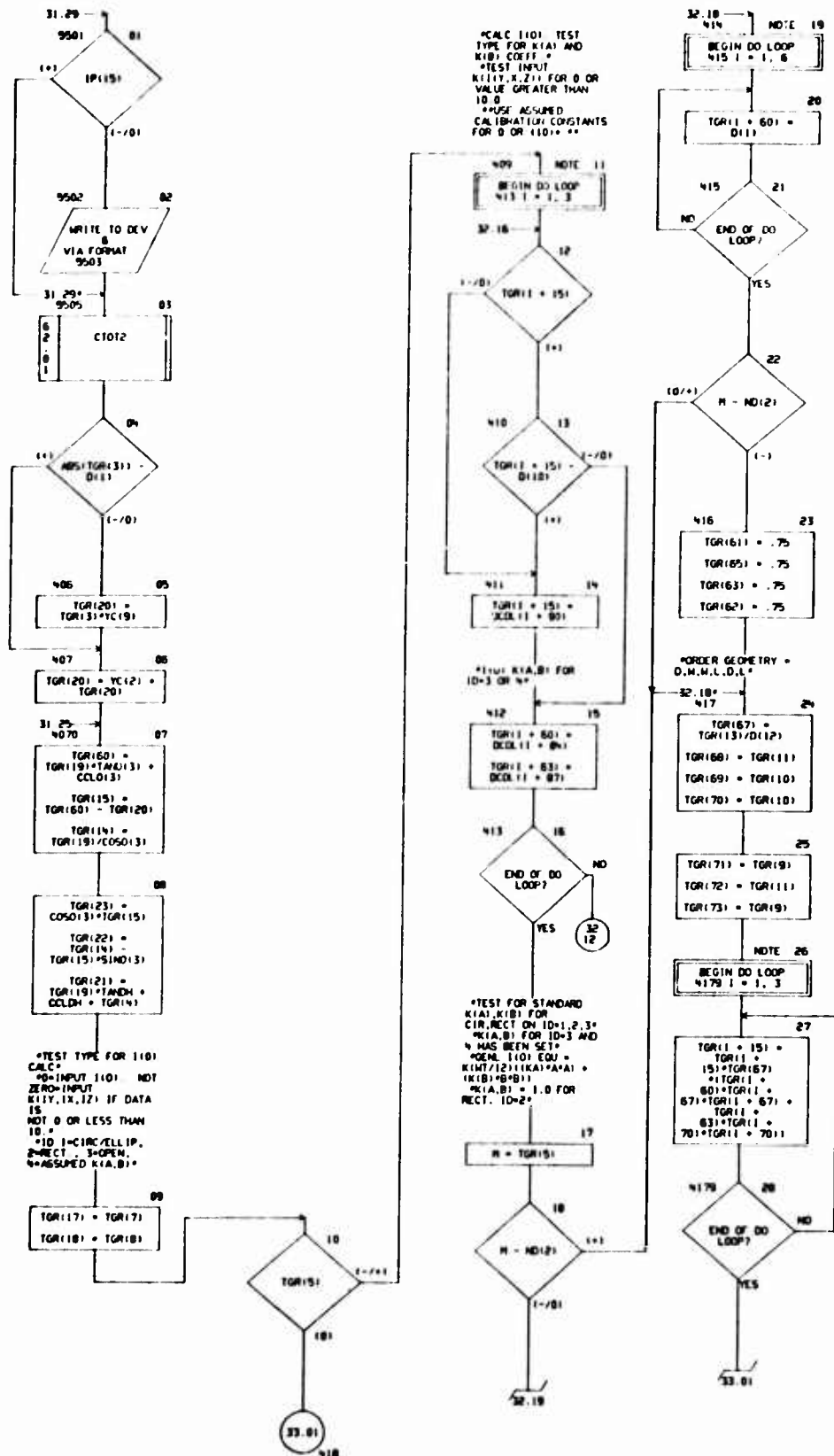


CHART TITLE - SUBROUTINE CDL

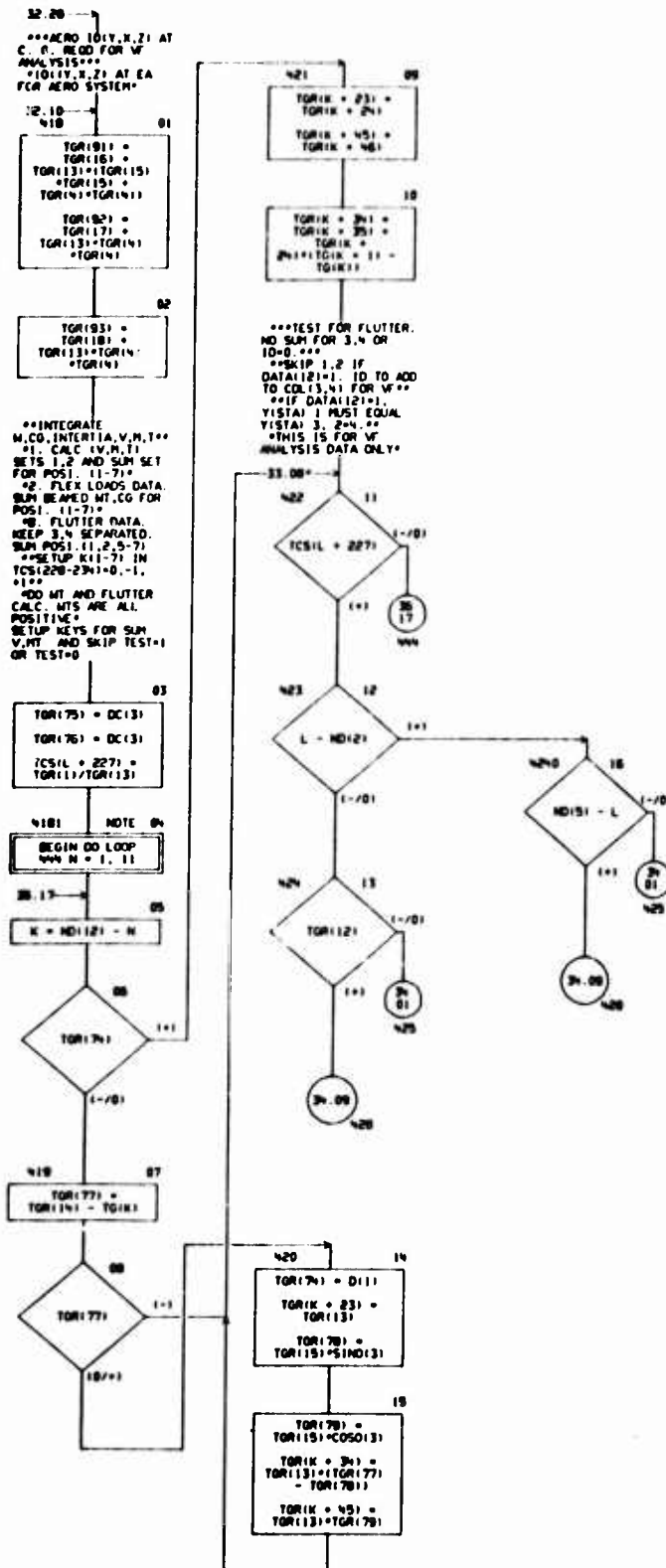


CHART TITLE - SUBROUTINE COL

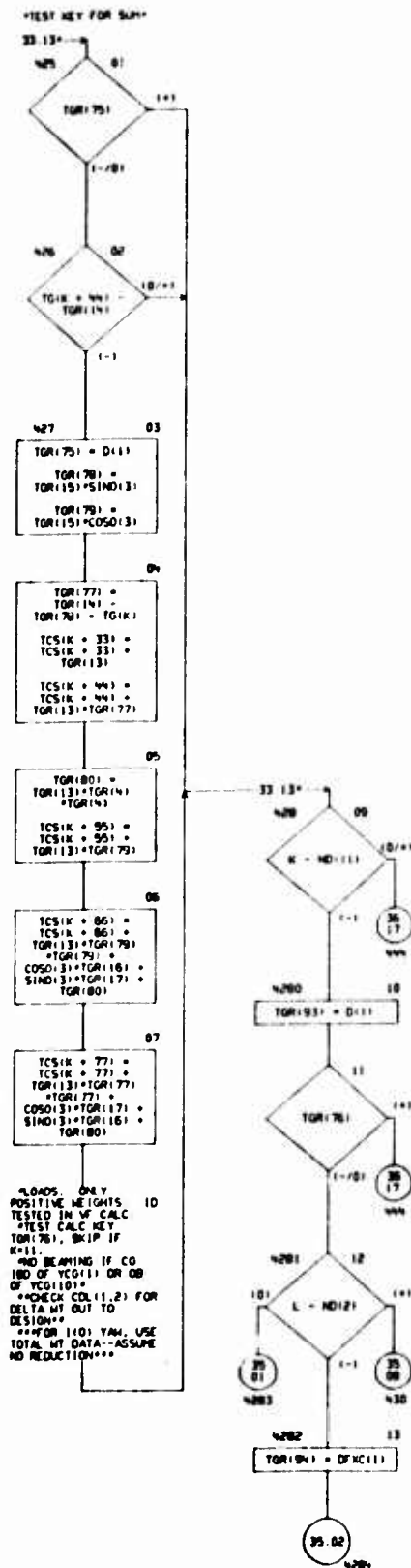


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
T0(300),TNG(400),CC(1300),TCS(250),TST(50),T1(24),
VC(150),TAND(9),CCLO(9),SIND(6),COSD(6),TGR(100),TGA(135),
BCOL(215),
C10Y(150),CRD(150),
BCOL(100),DFAC(2)
EQUIVALENCE (D(1),T(206)),(CD(1),T(121)),(ND(1),T(612)),
(DC(1),D(140)),(TGA(1),T(100)),(TNG(1),T(130)),(TST(1),T(170)),
(VC(1),T(201)),(TT(1),T(41)),(CC(1),CD(165)),(TCS(1),CD(140)),
(TGR(1),T(175)),(TGA(1),T(105)),
(TAND(1),T(122)),(CCLO(1),T(131)),(SIND(1),T(140)),
(COSD(1),T(146)),(BR2,T(12)),
(TANDH,T(90)),(CCLOH,T(91)),(DFAC(1),D(274)),
(CCOL(1),D(185)),
(CCOL(1),D(1200)),(ULF,D(122)),(UPWZ,D(1205)),
(I,ND(26)),(IN,ND(27)),(L,ND(28)),(K,ND(30)),(M,ND(31)),(J,ND(29)),
(C10Y(1),T(50)),(CRD(1),CD(195))
9503 FORMAT(1H,71X,3H** C102 (CALLED FROM C01) - IP(15) **)
9504 FORMAT (37H1 **COL SUEP--TGM AND TCS ARRAYS** 95X,
10H** COL - IP(16) **/END TCS )
902 FORMAT (1H,14,5E10.0)
905 FORMAT (6H0 TGR )

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE FDIS*****

FUEL WEIGHT/DIST AND INITIAL T-BOX WT. EVALUATION

```

graph TD
    10[10] --> 11{11}
    11 -- NO --> 12[12]
    11 -- YES --> 13[13]
    12 --> 14[14]
    14 --> 15[15]
    15 --> 16[16]
    16 --> 17{17}
    17 -- NO --> 18[18]
    17 -- YES --> 19[19]
    18 --> 20[20]
    19 --> 21{21}
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CHART TITLE - SUBROUTINE FDIS

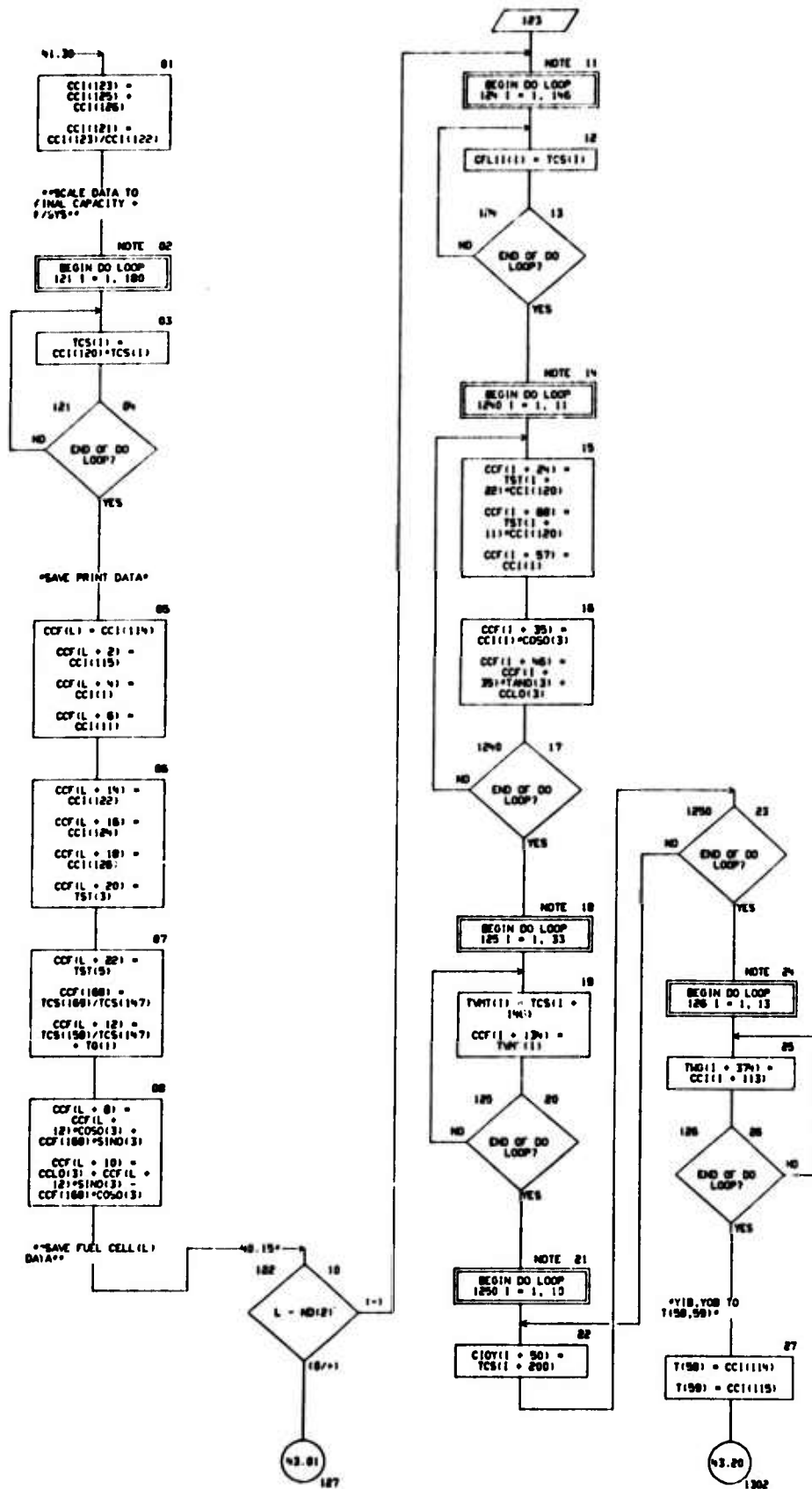


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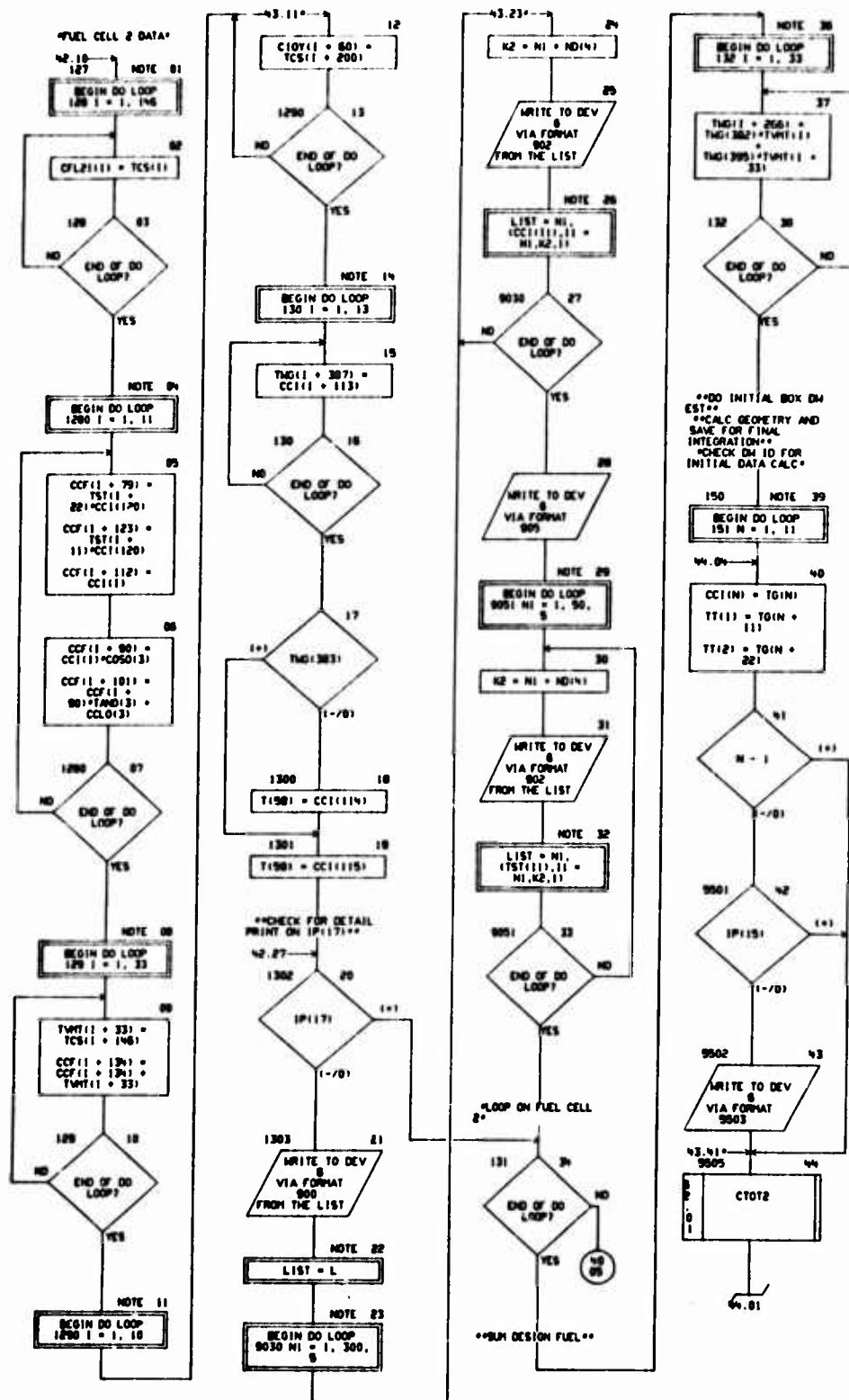
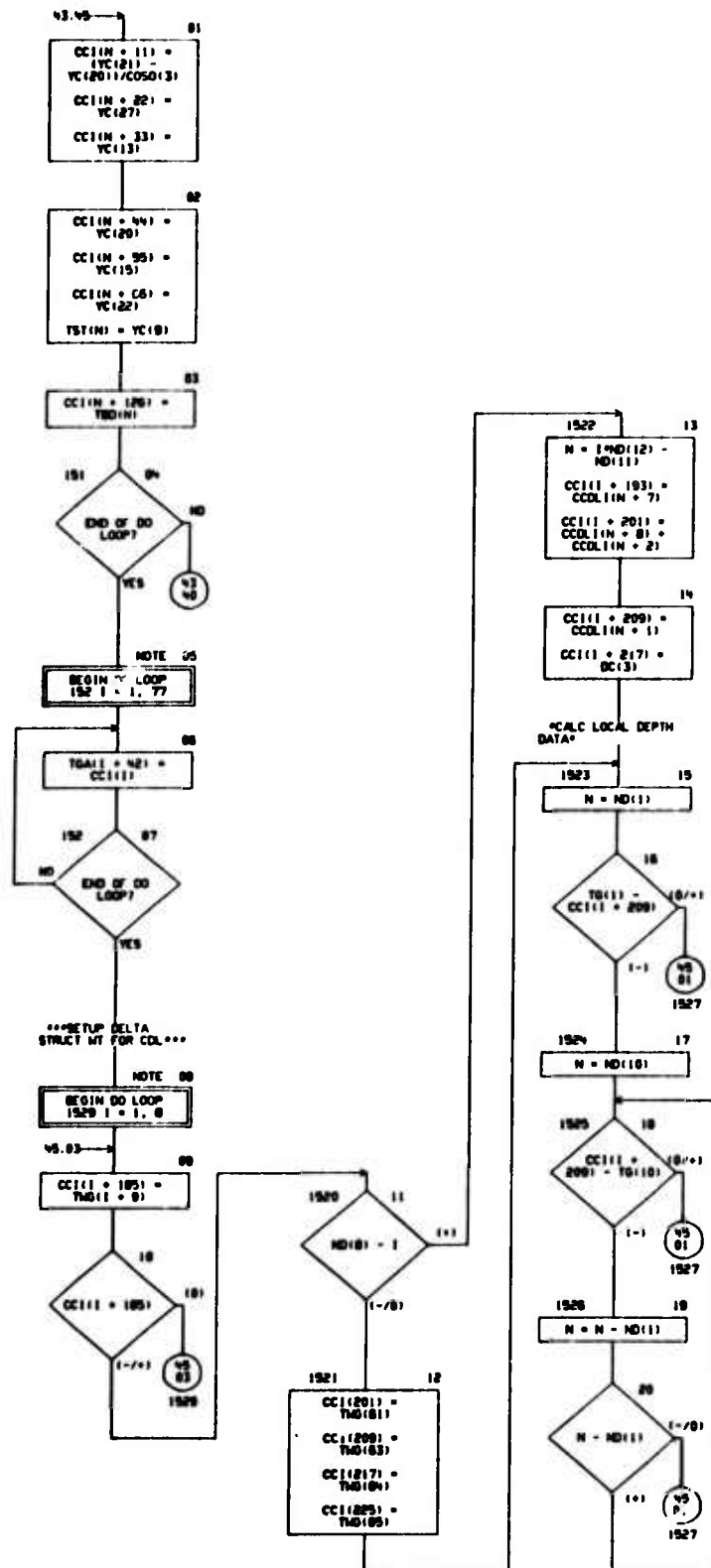


CHART TITLE - SUBROUTINE FOIS



```

graph TD
    Start([1927]) --> 01[CC(I) = 225;  
TOS(I) = 1;  
TOS(I)/TOS(I) = 1;  
TOS(I) = CC(I) + 200;  
TOS(I) = TOS(I)]
    01 --> 02[CC(I) = 225;  
CC(I) = 225;  
225 = CC(I) + 225;  
195 = CC(I) + 195]
    02 --> 03{END OF DO LOOP?}
    03 -- NO --> 05((195))
    03 -- YES --> 04[CC(195) = CC(1);  
CC(195) = DINT(1);  
CC(195) = DINT(1);  
CC(195) = DINT(1)]
    04 --> 06[CC(195) = DINT(1)]
    06 --> 08[NOTE 08  
BEGIN DO LOOP  
153 I = 1, 5]
    08 --> 07[TOS(I) = 195;  
CC(I) = 97]
    07 --> 09{END OF DO LOOP?}
    09 -- NO --> 08
    09 -- YES --> 10[NOTE 09  
BEGIN DO LOOP  
1530 J = 1, 11]
    10 --> 11[TOS(I) = 124;  
CC(I) = 126]
    11 --> 12{END OF DO LOOP?}
    12 -- NO --> 10
    12 -- YES --> 13[NOTE 10  
BEGIN DO LOOP  
15300 K = 1, 12]
    13 --> 14[TOS(I) = 124;  
CC(I) = 126]
    14 --> 15{END OF DO LOOP?}
    15 -- NO --> 13
    15 -- YES --> 16[15300 K = 1, 12]
    16 --> 17[15300 K = 1, 12]
    17 --> 18[15300 K = 1, 12]
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    138 --> 1
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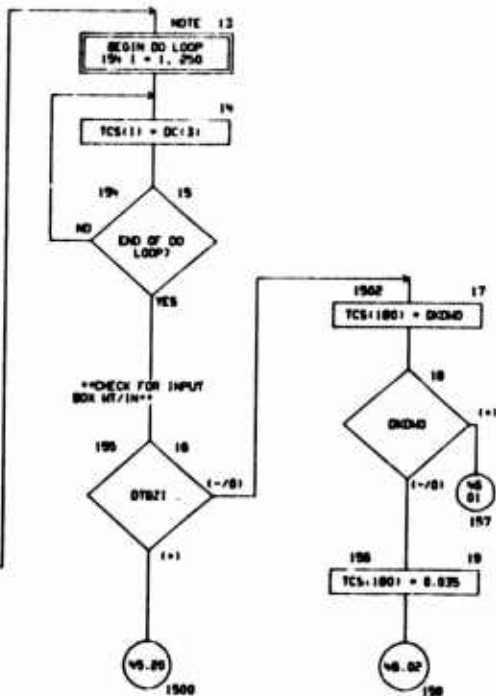
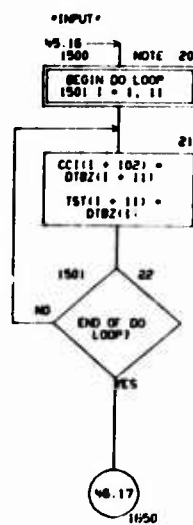
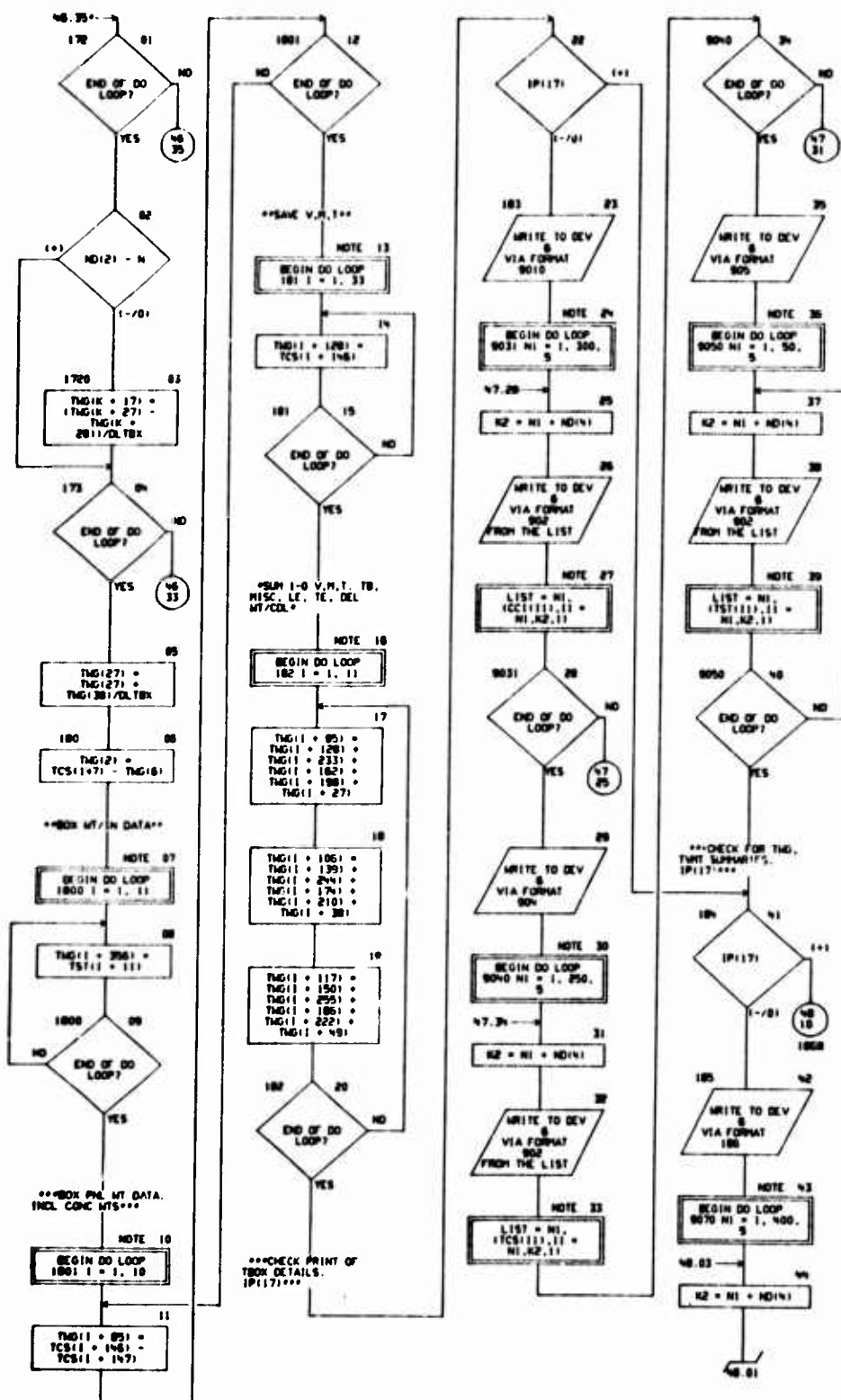


CHART TITLE - SUBROUTINE FDIS



[illegible]

CHART TITLE - NON PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(1620),D(2060),CD(2060),ND(100),DC(100),
TG(300),TNG(400),CC(1300),TCS(250),CFL(1150),CFLP(1150),
TST(50),TGR(100),TT(24),YC(150),TAND(8),CCLO(8),SIND(6),COSO(6),
BFL(14),TGA(135),TBD(11),DINT(112),TWMT(250),DKDIN(15),
DTBZ(22),
CCCL(1150),
CLOT(150),
CCF(200)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(TNG(1),T(1301)),(TST(1),T(1701)),
(YC(1),T(201)),(TT(1),T(41)),(CC(1),CD(1051)),(TCS(1),CD(1401)),
(CFL(1),CD(1951)),(CFLP(1),CD(1101)),(TOR(1),T(1751)),
(TAND(1),T(122)),(CCLO(1),T(13)),(SIND(1),T(140)),(DKDIN(1),D(110)),
(COSO(1),T(140)),(COTEA,T(152)),(B02,T(12)),(TWMT(1),CD(51)),
(B102,T(15)),(TGA(1),T(1051)),(MSTW,D(137)),(DINT(1),D(1143)),
(CFL(1),D(2061)),(TBD(1),TG(127)),
(INCAB,ND(60)),(INPAC,ND(85)),(DGMD,D(1051)),(DKDMD,D(144)),
(I,ND(26)),(N,ND(27)),(L,ND(28)),(J,ND(29)),(K,ND(30)),(M,ND(31))
EQUIVALENCE (TANG,T(92)),(DINID,D(271)),(DKDIN(1),D(1970)),
(DTBZ(1),D(1121)),(DTBZ1,D(1120)),
(BLFLD,D(170)),
(CCL(1),CD(1901)),
(CLTBX,T(100)),
(CLOT(1),T(501)),
(CCF(1),CD(1051)),
(CCL5,T(93))
9513 FORMAT(1H,50X,50H** CLOT2 (CALLED FROM FDIS - LOOP 112) - IP(15)
**
9500 FORMAT(14H) **FDIS SUBR. CC ARRAY DATA FOR FUEL CELL 11,
3H***,50X,10H** FDIS - IP(17) **/END CC )
9502 FORMAT(1H 14,5E10 0)
9504 FORMAT(10H TCS )
9505 FORMAT(10H TST )
9506 FORMAT(10H TWMT)
9503 FORMAT(1H,50X,50H** CLOT2 (CALLED FROM FDIS - LOOP 151) - IP(15)
**
9510 FORMAT(10H) **FDIS SUBR. BOX AND STRUCT DATA--CC1,TCS,TST APPA
YS***,31X,10H** FDIS - IP(17) ** SHD CC )
1000 FORMAT(14H) **FDIS SUBR. TNG AND TWMT ARRAY DATA**NSK,
10H** FDIS - IP(17) **/END TNG )
1170 FORMAT(10H) CASE(14,12X,30H**WING FUEL DISTRIBUTION SUPPLY***,
31X,10H** FDIS - IP(18) **//
70H CELL YIB(0P) YOB(0P) YIB(1) YOB(1)
YCG(0P) XCG(1P) YCG(1P)
1000 FORMAT(10H) **FUEL HEIGHTS--LB/SIDE**//50H CE
LL TOTAL CAPACITY FUEL/SYS RND(1P) RND(1P)
1000 FORMAT(1H 3X,11,1X,7F10.2)
1000 FORMAT(1H 3X,11,1X,2F10.1,F0.1,F11.4,F0.1)
1010 FORMAT(10H) **FUEL CELL DISTRIBUTIONS**//50H *
PANEL HEIGHTS--LB/SIDE* **FUEL CELL STATION AND H
EIGHT/INCH DATA**//50H
CELL
L 1. CELL 2. //100H CELL
1 CELL 2 SECT YIB(1) X(1P) Y(1P) LB/IN SECT YIB(
1 X(1P) Y(1P) LB/IN )
1002 FORMAT(10H TOTAL,F0.1,F0.1,4X,12,F0.2,F10.2,F0.2,F0.3,4X,12,F0.2,F
10.2,F0.2,F0.3)
1003 FORMAT(1H 13,F10.1,F0.1,4X,12,F0.2,F10.2,F0.2,F0.3,4X,12,F0.2,F10
.2,F0.2,F0.3)
1004 FORMAT(10H) **TOTAL FUEL PLUS FU
EL SYSTEM 1-0 LOADS**//50H **TOTAL*
**FUEL CELL 1* **FUEL CELL 2* //100H S

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05/10/74

AUTOFLW CHART SET - SHEEP WIND AND EMPENNAGE MODULE - PAGE 90

CHART TITLE - NON-PROCEDURAL STATEMENTS

```

      TA  SHEAR  B..MEM  T. MEM  SHEAR  B. MEM  T. M
      CH  SHEAR  B. MEM  T. MEM)
105  FORMAT (1H 13,F11.1,F12.1,F11.1,3X,F9.1,F11.1,F10.1,3X,F9.1,F11.1,
      F10.1)

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08/10/74

AUTOFLOW CHART SET - SHEEP MING AND EMPENNAGE MODULE - PAGE 51

CHART TITLE - INTRODUCTORY COMMENTS

****SUBROUTINE TBM1****

FUEL/TORQUE-BOX WEIGHT INTEGRATION

CHART TITLE - SUBROUTINE TBM11

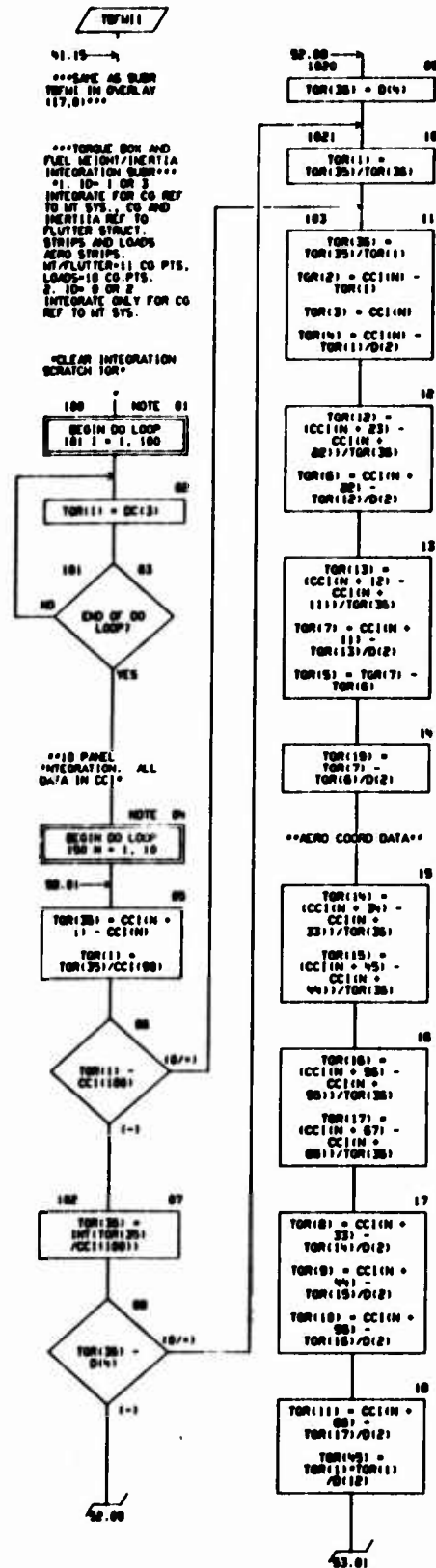


CHART TITLE - SUBROUTINE TORWII

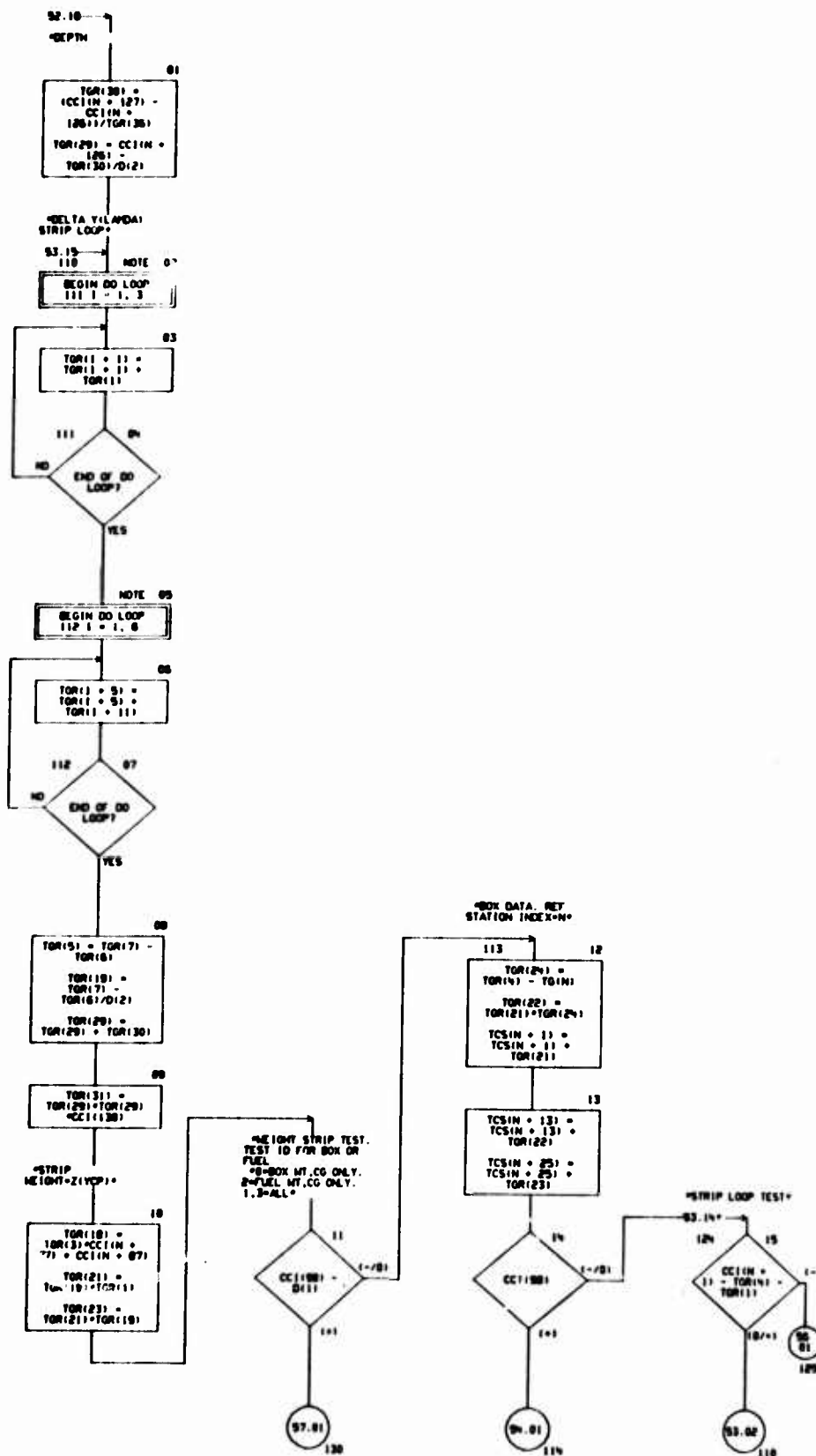
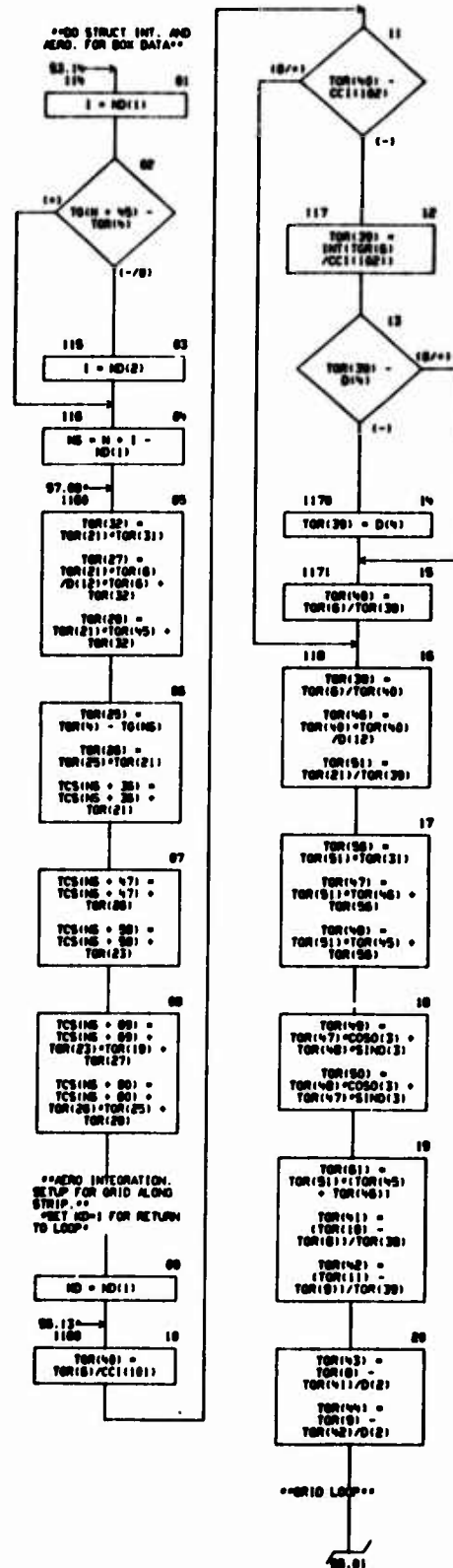


CHART TITLE - SUBROUTINE TBM11



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graph TD
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*END OF PAGE. TEST
 FOR CONC. NYS.
 SHED-ONE. 1.000 ONLY*
 *END- 2 ON 3 FOR
 RETURN FROM GRID
 LINES. 10-1 ON 3

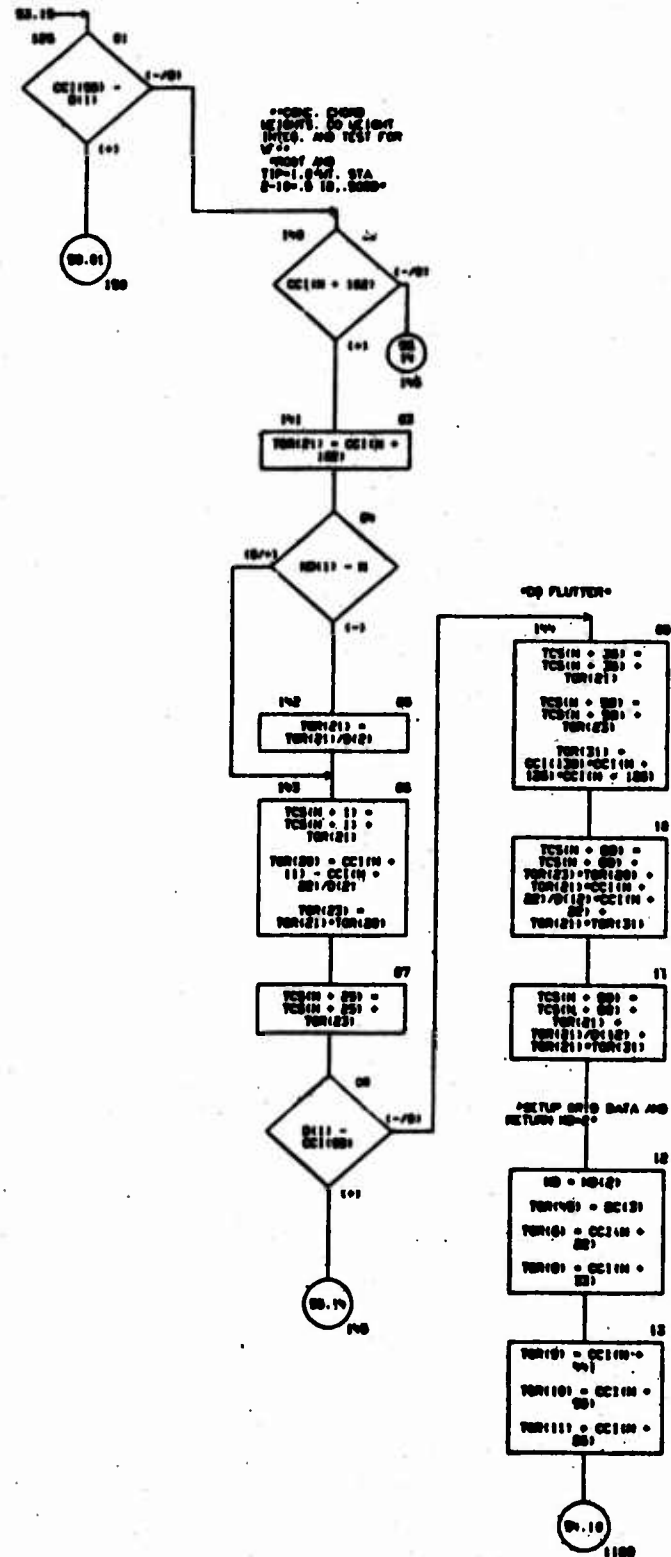
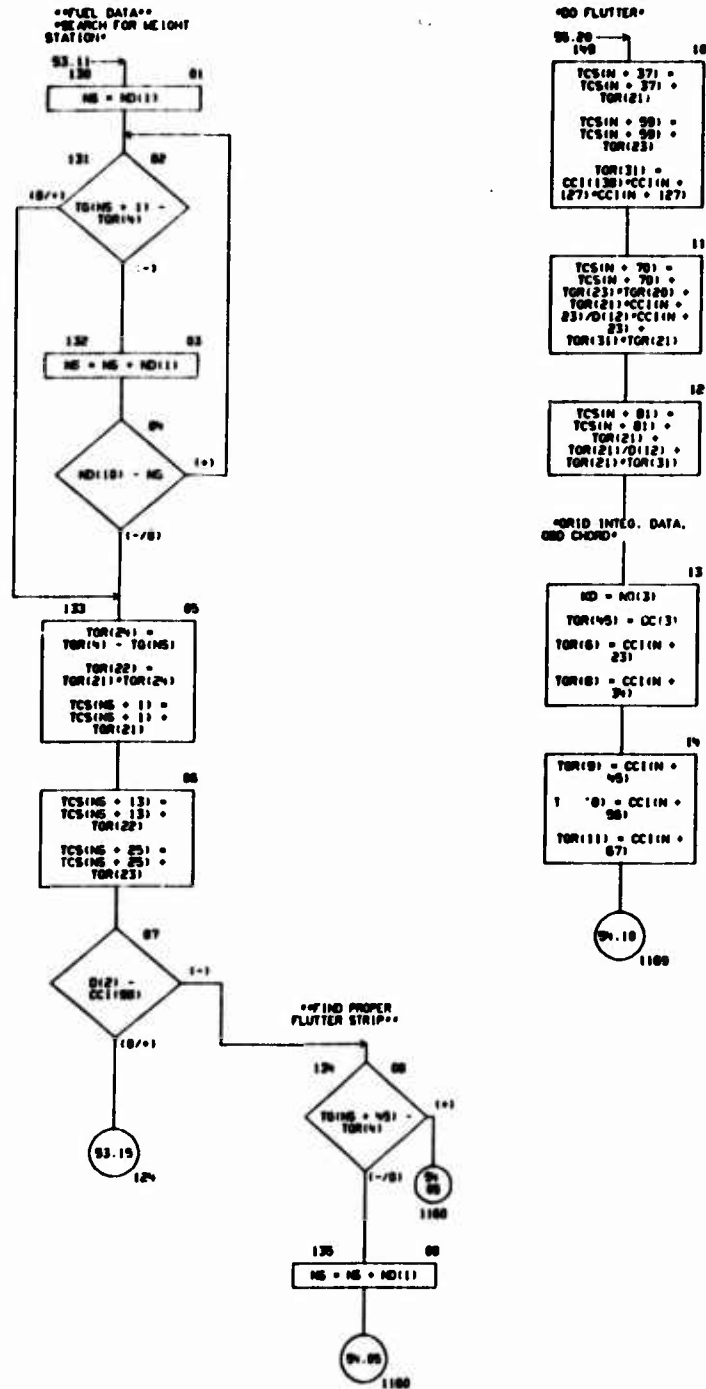


CHART TITLE - SUBROUTINE TORW11




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CHART TITLE - SUBROUTINE TBMH11

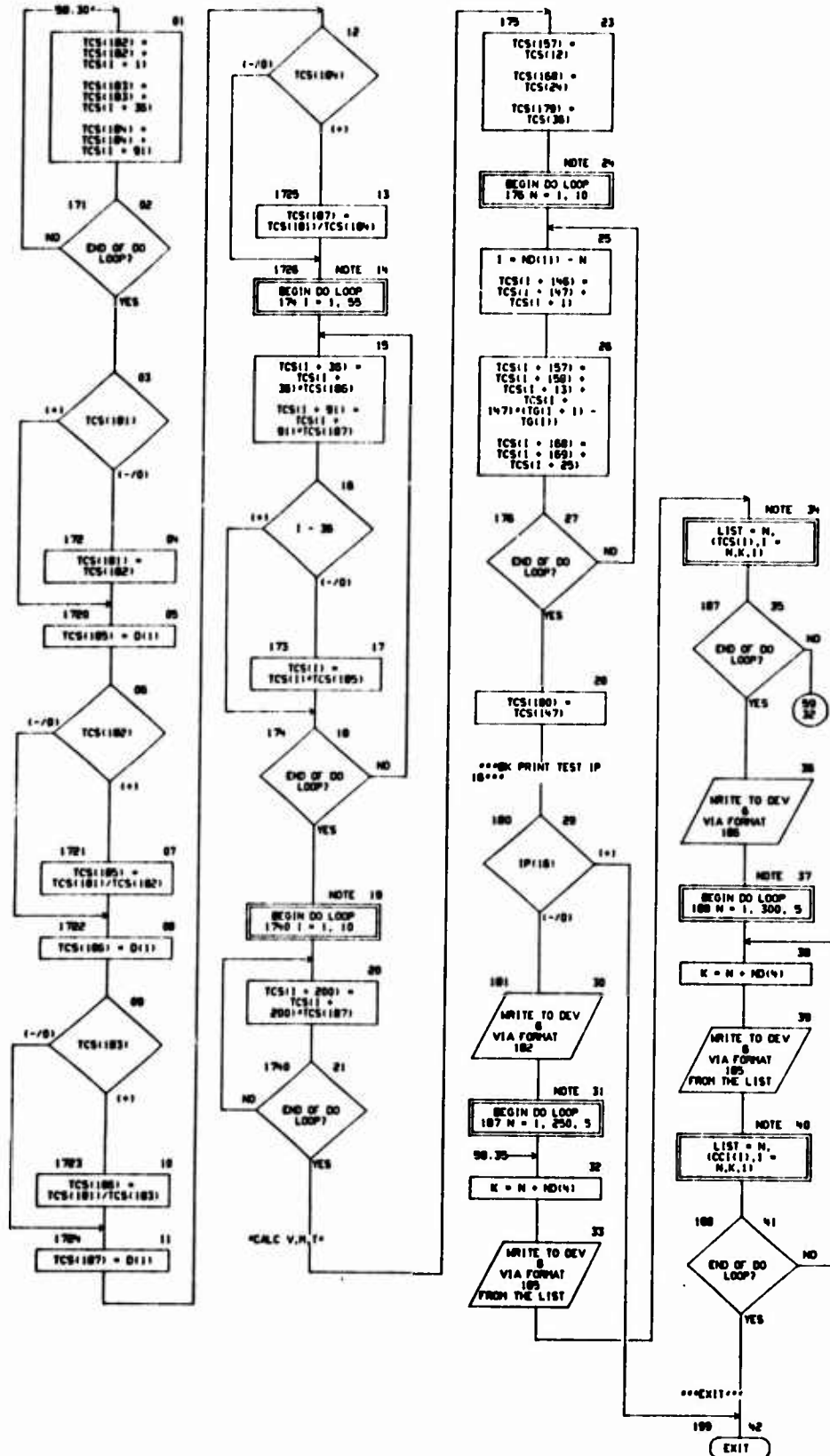


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2080),CD(2000),ND(100),DC(100),
TG(300),THG(400),YC(160),YT(24),TST(50),TGR(100),
CC(1300),TCS(250),TGA(135),
SIND(6),COSO(6)
EQUIVALENCE (D(1),T(2081)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(THG(1),T(1301)),(TST(1),T(1701)),
(TGR(1),T(1751)),(YC(1),T(351)),(YT(1),T(411)),(TGA(1),T(1051)),
(CC(1),CD(1051)),(TCS(1),CD(1401)),
(SIND(1),T(140)),(COSO(1),T(146)),
(IJ,ND(26)),(IK,ND(27)),(IL,ND(28)),(IK,ND(29)),(INS,ND(30)),
(INA,ND(31)),(ND,ND(32))
102 FORMAT (7H1 ***TBFW11 SUBR. FUEL/BOX STRUCT. INTEGRATION DATA A
-TCS AND CC1 ARRAYS***,12X,21H** TBFW11 - IP(16) **/END TCS )
105 FORMAT (1H 1N,5E10.0)
106 FORMAT (8H0 CC1 )

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08/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 61

CHART TITLE - INTRODUCTORY COMMENTS

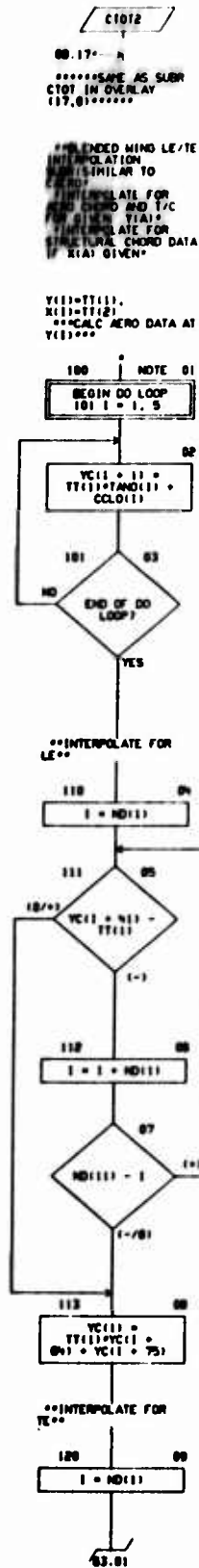
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*****SUBROUTINE C102*****

PLATFORM CHORD EVALUATION

.....

CHART TITLE - SUBROUTINE CT02



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CHART TITLE - SUBROUTINE CT012

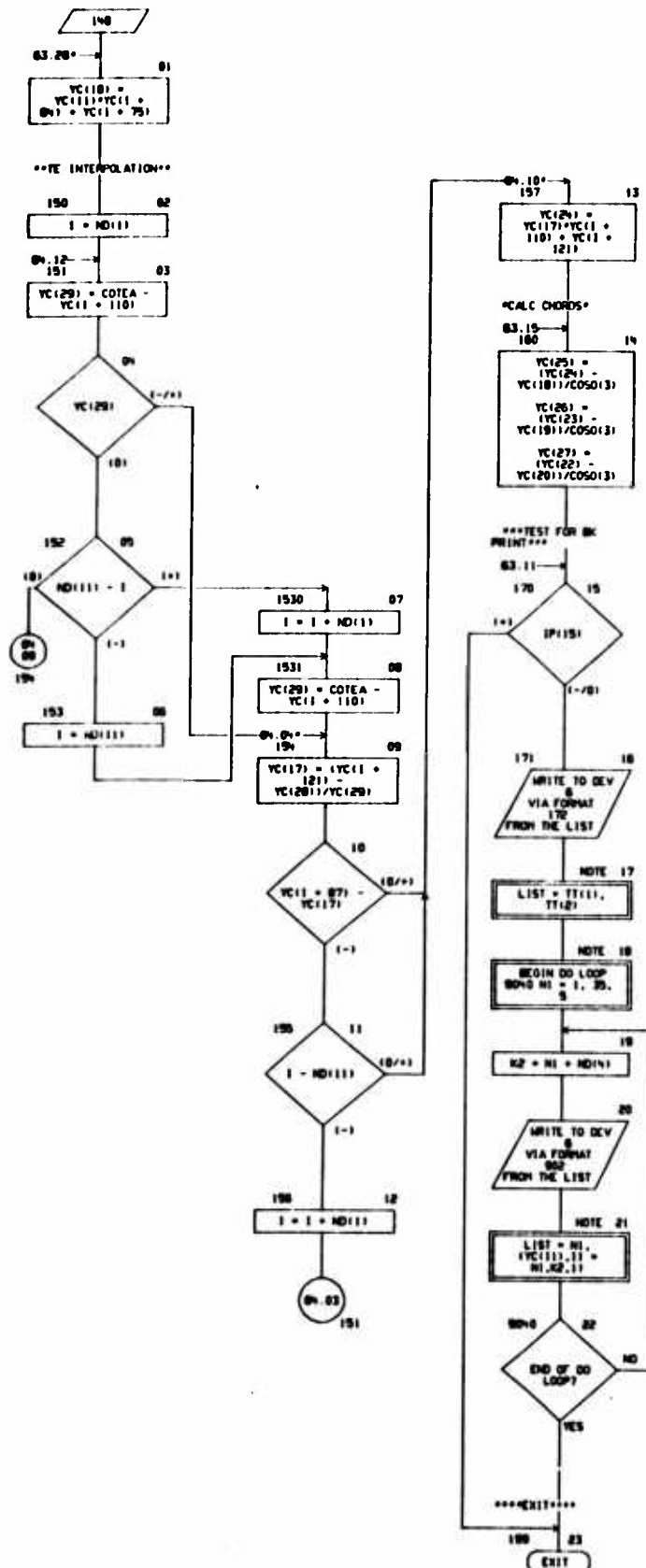


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
VC(150),TT(24),VTC(60),
TAND(8),CCLO(8),SIND(8),COSO(8)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(8121)),
(VC(1),T(2011)),(TT(1),T(4111)),(DC(1),D(1401)),(VTC(1),T(3511)),
(TAND(1),T(1221)),(CCLO(1),T(1311)),(SIND(1),T(1401)),
(COSO(1),T(1461)),
(COTE4,T(1521))
172 FORMAT(1H0,20X,7HT(1) =,F0.3,5X,7HT(2) =,F0.3/6H VC )
802 FORMAT (1H 1N,5C10.0)

```


06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 06

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE PRIM*****

DESIGN DATA PRINT - MISC CONTENT MASS DATA

CHART TITLE - SUBROUTINE PRTH

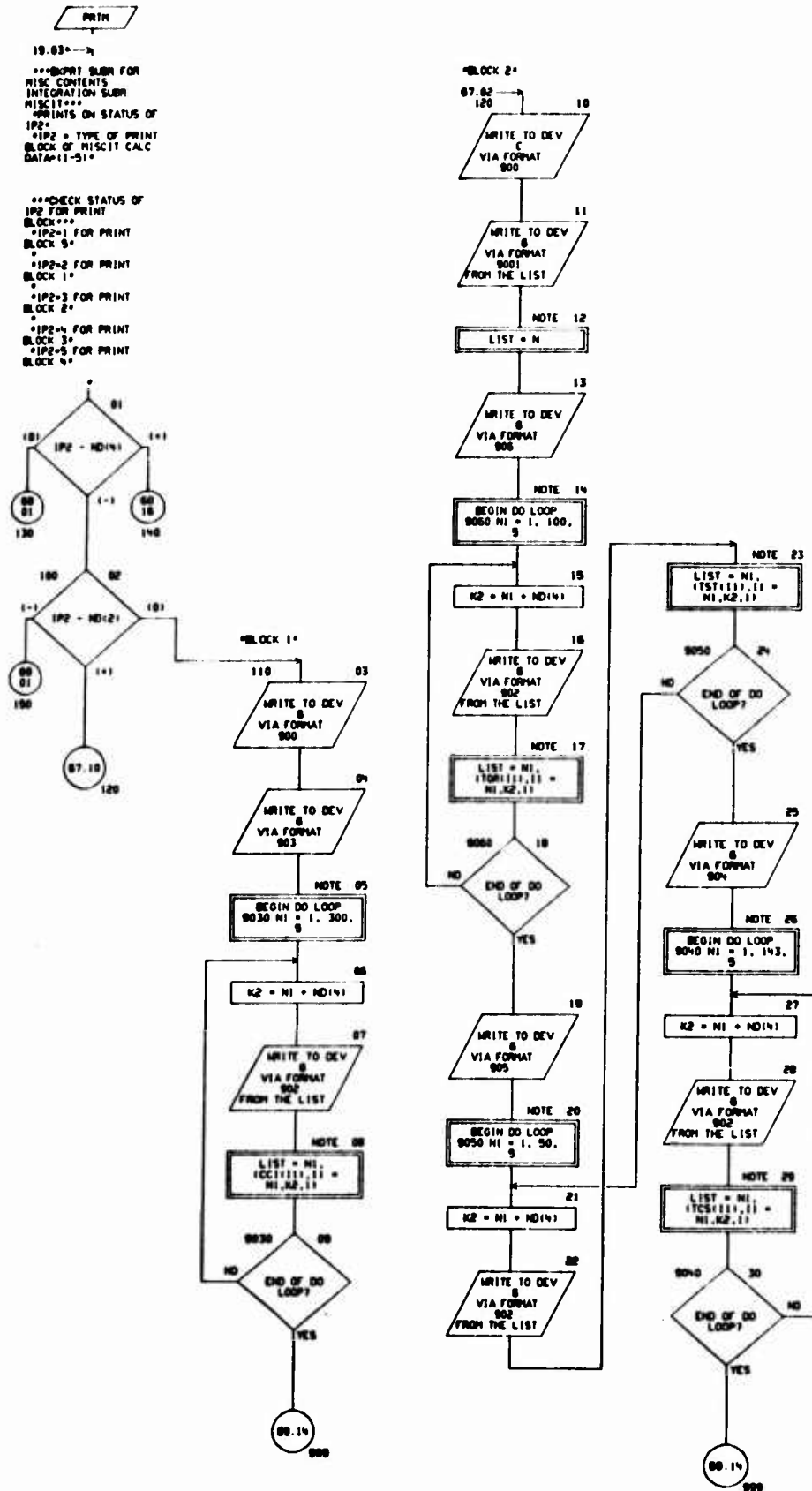


CHART TITLE - SUBROUTINE PRTH

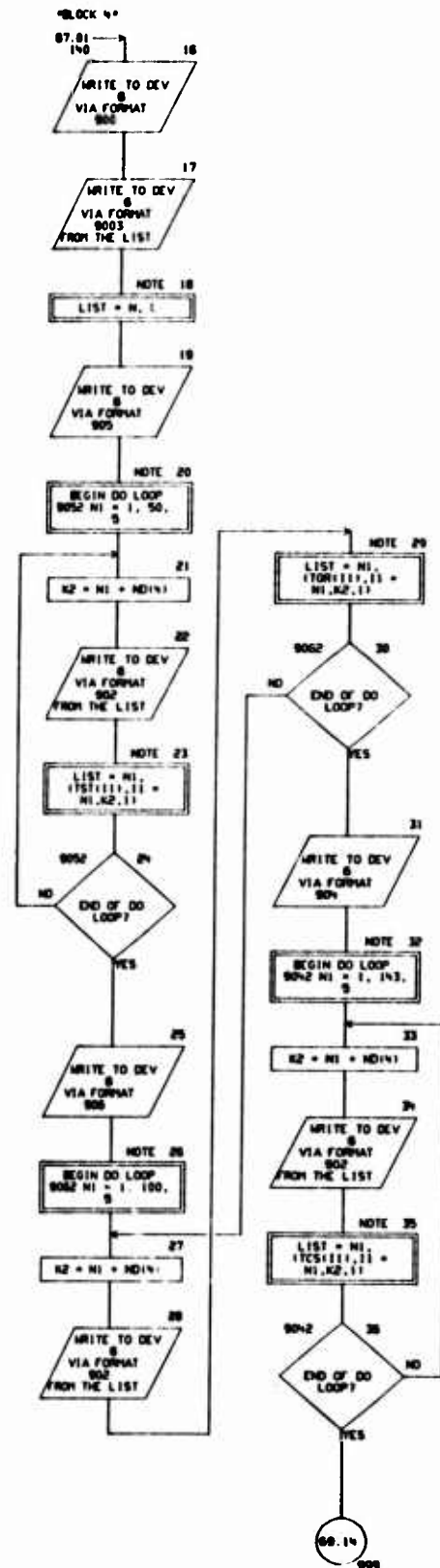
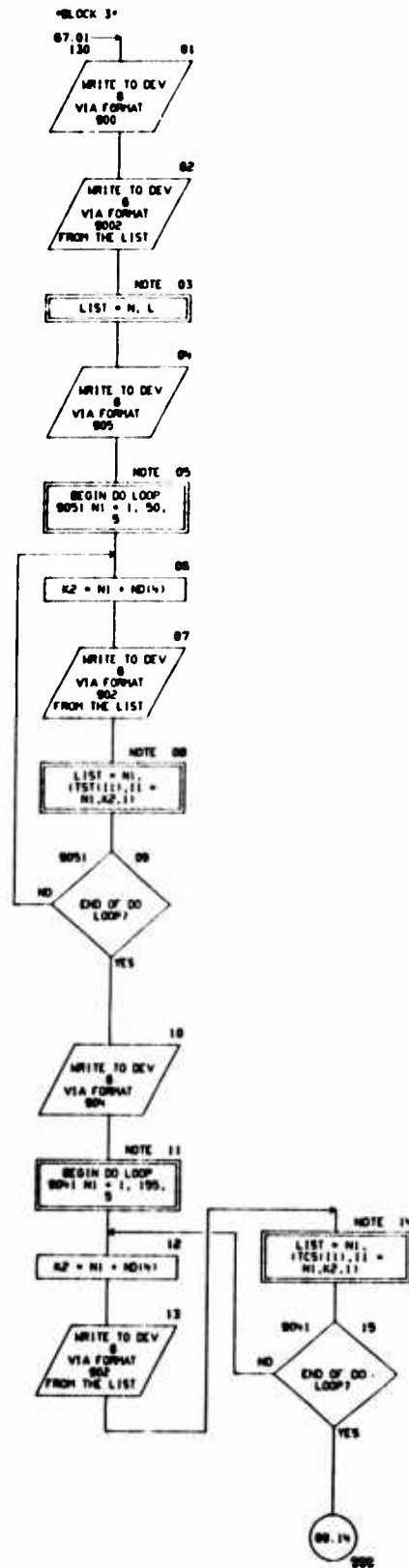


CHART TITLE - SUBROUTINE PRTH

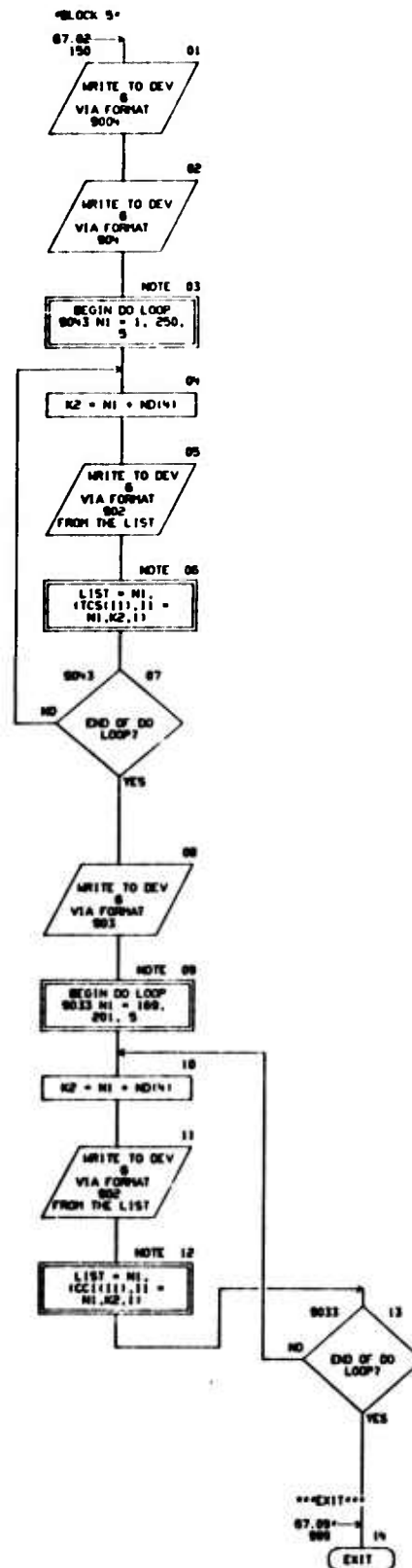


CHART TITLE - NON PROCEDURAL STATEMENTS

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COMMON T
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TCS(250),CC(1300),
TST(50),TGR(100)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TCS(1),CD(1401)),(CC(1),CD(1651)),
(TST(1),T(1701)),(TGR(1),T(1751)),
(IP2,ND(131)),
(IN,ND(271)),(L,ND(281))
900  FORMAT (69H)  ***PRTH SUBR -- DATA=CCI ARRAY.  CALC DATA=TCS, TST,
      TGR ARRAYS***,22X,19H** PRTH - (P(13) **
902  FORMAT (1H 14,5E10 8)
903  FORMAT (6H0 CCI )
904  FORMAT (6H0 TCS )
905  FORMAT (6H0 TST )
906  FORMAT (6H0 TGR )
9001 FORMAT (46H0  *UNIF. DIST. MTS. TGR,TST,TCS(1-143). STA13)
9002 FORMAT (46H0  *CONC. PT. ITEMS. TST AND TCS(1-143). STA13,6H  IT
      EN12)
9003 FORMAT (46H0  *DIST. LINE ITEMS. TST,TGR,TCS(1-143). STA13,6H
      LINE12)
9004 FORMAT (68H)  ***PRTH SUBR--FINAL OUTPUT DATA ARRAYS--TCS AND CC
      I(100-201)***,23X,19H** PRTH - (P(14) **)

```

OVERLAY (16,0)

DESIGN DATA FOR TORQUE-BOX ANALYSIS

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PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS

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FORTRAN MODULE NING AND EMPENNAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000021)	2.04	10	(000019)	2.03	(000019)	2.03
(000029)	2.08	20	(000027)	2.07	(000027)	2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MODATA

(000041)	5.01	MODATA	(000021)	2.04-X		
(000087)	5.02	100				
(000098)	5.03		(000089)	5.04		
(000089)	5.04	101				
(000091)	5.06		(000092)	5.07		
(000092)	5.07	102				
(000096)	5.09		(000101)	5.11		
(000101)	5.11	103				
(000106)	5.13		(000112)	5.18		
(000108)	5.15	1030				
(000110)	5.16	1031	(000107)	5.14		
(000111)	5.17	1032				
(000112)	5.18	1033	(000107)	5.14	(000109)	5.15
(000120)	5.22		(000122)	5.23	(000110)	5.16
(000122)	5.23	104				
(000126)	5.25		(000128)	5.26		
(000128)	5.26	105				
(000132)	5.28		(000134)	5.29		
(000134)	5.29	106				
(000138)	5.31		(000139)	5.32		
(000139)	5.32	1060				
(000144)	5.34		(000165)	6.08		
(000165)	6.08	107				
(000169)	6.10		(000175)	6.12		
(000175)	6.12	108				
(000181)	6.15	1080				
(000185)	6.16	1081	(000180)	6.14		
(000186)	6.17		(000191)	6.20		
(000190)	6.19	1082				
(000191)	6.20	1083	(000189)	6.18		
(000195)	6.22		(000197)	6.23		
(000197)	6.23	1084				
(000201)	6.25		(000202)	6.26		
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(000207)	6.28		(000208)	6.29		
(000208)	6.29	1090				
(000212)	6.31		(000218)	6.33		
(000218)	6.33	110				
(000222)	6.35		(000223)	6.36		
(000223)	6.36	111				
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(000254)	7.10	261				
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(000263)	7.15	265				
(000267)	7.18		(000268)	7.21		
(000269)	7.21	266				
(000273)	7.22	299	(000253)	7.09		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MTLCH

(000284)	10.01	MTLCH	(000228)	8.37-X				
(000306)	10.01	100						
(000311)	10.02	112	(000389)	11.10				
(000313)	10.04	113						
(000314)	10.05	114	(000312)	10.03				
(000322)	10.08	118						
(000324)	10.10	119	(000321)	10.07				
(000327)	10.12	120	(000313)	10.04	(000323)	10.09		
(000332)	10.14	129						
(000335)	10.15	130						
(000338)	10.16	131	(000335)	10.15				
(000339)	10.17		(000340)	10.18				
(000340)	10.18	132						
(000344)	10.20	139						
(000352)	10.22	199	(000343)	10.19	(000345)	10.21	(000369)	11.07
(000348)	11.01	140	(000335)	10.15			(000385)	11.17
(000349)	11.02		(000350)	11.03				
(000350)	11.03	141						
(000359)	11.06	191						
(000369)	11.07	192	(000358)	11.05				
(000370)	11.08	193						
(000371)	11.09		(000374)	11.12				
(000373)	11.11	1930						
(000374)	11.12	194	(000372)	11.10				
(000379)	11.14	195						
(000381)	11.16	196						
(000385)	11.17	197	(000378)	11.13	(000380)	11.15		
(000386)	11.18	198						

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MTLFW

(000403)	14.01	MTLFW	(000332)	10.14-X				
(000419)	14.01	100						
(000420)	14.02		(000421)	14.03				
(000421)	14.03	101						
(000429)	14.06	103	(000426)	14.05				
(000462)	14.07	117	(000429)	14.06	(000435)	15.04	(000438)	15.07
			(000446)	15.17			(000441)	15.12
(000466)	14.10	118	(000429)	14.06	(000432)	15.01	(000434)	15.03
			(000450)	15.11	(000443)	15.14	(000446)	15.17
(000468)	14.12		(000470)	14.13				
(000470)	14.13	119						
(000432)	15.01	104	(000426)	14.05				
(000433)	15.02	105						
(000435)	15.04	106						
(000436)	15.05	107						
(000438)	15.07	108						
(000439)	15.08	109						
(000449)	15.10	114	(000432)	15.01				
(000441)	15.12	110						
(000442)	15.13	111						
(000444)	15.15	112						
(000445)	15.16	113						
(000474)	15.18	120	(000434)	15.03	(000437)	15.06	(000440)	15.09
(000475)	15.19		(000478)	15.20			(000443)	15.14
(000478)	15.20	121					(000446)	15.17
(000482)	15.23		(000483)	15.24				
(000483)	15.24	122						
(000486)	15.25	130	(000471)	14.13				
(000488)	15.28	131						
(000498)	15.30	132	(000487)	15.28				
(000501)	15.32	133						
(000502)	15.33	134	(000500)	15.31				
(000504)	15.35	135						
(000507)	15.36	136	(000503)	15.34				
(000512)	15.37	140						

CARD ID PAGE/BOX NAME REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)

(000514)	15.29		(000515)	16.01
(000519)	16.01	141		
(000517)	16.02	142	(000561)	16.23
(000527)	16.04	143		
(000528)	16.05		(000551)	16.16
(000532)	16.06	144		
(000536)	16.07	145		
(000540)	16.10		(000543)	16.12
(000543)	16.12	146		
(000546)	16.13	147		
(000547)	16.14	148		
(000548)	16.15	149	(000546)	16.13
(000551)	16.16	150	(000547)	16.14
(000554)	16.18	153	(000554)	16.17
(000570)	16.19	199		
(000555)	16.20	151		
(000559)	16.22		(000560)	16.23
(000560)	16.23	152		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MTLPM

(000581)	19.01	MTLPM	(000544)	16.20-X	(000559)	11.06-X
(000599)	19.02	101				
(000608)	19.04	104	(000588)	19.01		
(000610)	19.06	105	(000600)	19.03		
(000613)	19.08	107				
(000629)	19.12	120				
(000630)	19.13	121				
(000637)	19.19	130				
(000638)	19.20	131				
(000643)	19.22	199	(000636)	19.18	(000637)	19.19

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE ALOAD

(000731)	22.04	202				
(000734)	22.06		(000737)	22.07		
(000737)	22.07	2020				
(000654)	22.08	ALOAD	(000231)	7.01-X		
(000697)	22.09		(000698)	22.10		
(000688)	22.10	250				
(000720)	22.11	200				
(000721)	22.12	201				
(000776)	22.14	100	(000720)	22.11		
(000780)	22.15		(000787)	22.17		
(000787)	22.17	101				
(000790)	22.18	102	(000777)	23.14		
(000797)	22.20	110	(000794)	22.18		
(000739)	23.01	203	(000730)	22.03		
(000742)	23.03		(000745)	23.04		
(000745)	23.04	2030				
(000747)	23.05	204	(000730)	22.03	(000738)	22.07
(000748)	23.06		(000773)	23.13		
(000773)	23.13	205				
(000804)	23.15	111	(000787)	22.20		
(000805)	23.16	112				
(000807)	23.18		(000813)	23.20		
(000813)	23.20	113				
(000816)	23.21	114	(000794)	22.18	(000804)	23.15
(000819)	23.22	1140	(000816)	23.21		
(000823)	24.01	1141	(000816)	23.21		
(000831)	24.04	120	(000787)	22.20		
(000843)	24.07	121	(000848)	24.08		
(000851)	24.09	122	(000848)	24.08		

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 4	
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAGE/BOX	
(000050)	24.12	123	(000055)	24.11			
(000050)	24.14	124	(000055)	24.11			
(000059)	24.15	125					
(000071)	24.17	126					
(000075)	24.18	127	(000060)	24.14			
(000076)	24.19	128					
(000080)	25.01	129	(000060)	24.14			
(000082)	25.03	130					
(000083)	25.04	131	(000081)	25.02			
(000089)	25.07	132					
(000090)	25.08	133	(000070)	24.16	(000072)	24.17	(000080) 25.06
(000094)	25.09	140	(000075)	24.18	(000077)	24.19	
(000095)	25.10	141					
(000092)	25.11	142	(000094)	25.09			
(000090)	25.13	150	(000099)	25.10			
(000016)	25.16		(000017)	25.17			
(000017)	25.17	1500					
(000010)	25.19		(000047)	26.06			
(000021)	25.21	1501					
(000023)	25.23	1502					
(000024)	25.24	1503	(000022)	25.22			
(000020)	25.26	1504					
(000029)	25.27	1505	(000027)	25.25			
(000035)	25.29	1506					
(000040)	26.01	1507	(000035)	25.28			
(000043)	26.03	1508					
(000046)	26.05	1509	(000042)	26.02			
(000047)	26.06	151	(000020)	25.20			
(000050)	26.07	1510					
(000051)	26.08		(000006)	26.16			
(000056)	26.10		(000051)	26.13			
(000050)	26.12	1511					
(000051)	26.13	1512	(000057)	26.11			
(000056)	26.16	152					
(000071)	26.17	160	(000010)	23.22	(000027)	24.03	
(000073)	26.19	1600					
(000074)	26.20	1601	(000072)	26.18			
(000075)	26.21		(000078)	26.22			
(000078)	26.22	161					
(000081)	26.23	162	(000010)	23.22			
(000082)	26.24	163	(000027)	24.03			
(000084)	26.26		(000097)	26.34			
(000094)	26.32	164					
(000095)	26.33	165	(000093)	26.31			
(000097)	26.34	166					
(001000)	26.35	169	(000081)	26.23			
(001002)	27.01	170	(001000)	26.35			
(001010)	27.04	173					
(001014)	27.06	176	(001009)	27.03			
(001016)	27.08		(001017)	27.10			
(001017)	27.10	177					
(001023)	27.13		(001025)	27.16			
(001025)	27.16	180					
(001037)	27.19		(001040)	27.21			
(001040)	27.21	183					
(001043)	27.22	199	(001000)	26.35			

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE GJAL

(001094)	30.01	GJAL	(000234)	7.02-X
(001095)	30.04	1000		
(001098)	30.05	1001	(001094)	30.03
(001101)	30.06	100		
(001104)	30.08		(001105)	30.09
(001105)	30.09	101		
(001110)	30.11		(001111)	30.12
(001111)	30.12	1018		

CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)			
(001115)	30.14	102				
(001116)	30.15	103				
(001119)	30.16	104	(001116)	30.15		
(001120)	30.17		(001123)	30.18		
(001123)	30.18	105				
(001127)	31.01	1006	(001116)	30.15		
(001129)	31.02	106				
(001129)	31.03	107				
(001135)	31.06	108				
(001136)	31.07	109	(001134)	31.05		
(001138)	31.09		(001139)	31.10		
(001139)	31.10	1090				
(001142)	31.12	110	(001114)	30.13	(001127)	31.01
(001162)	31.17	111			(001129)	31.02
(001171)	31.20	113	(001189)	31.19	(001369)	36.08
(001172)	31.21	114	(001189)	31.19	(001371)	36.09
(001173)	31.22		(001177)	31.25		
(001176)	31.24	115				
(001177)	31.25	119	(001175)	31.23		
(001179)	31.26	120				
(001181)	31.28	1200				
(001182)	31.29	1201	(001180)	31.27		
(001188)	32.01	121				
(001193)	32.02	122				
(001198)	32.04	123				
(001204)	32.06	124				
(001211)	32.08	126				
(001217)	32.11	128				
(001222)	32.12	150				
(001225)	32.14		(001226)	32.15		
(001226)	32.15	151				
(001230)	32.17	152	(001227)	32.16		
(001240)	32.18	158	(001230)	32.17		
(001233)	33.01	153	(001230)	32.17		
(001234)	33.02		(001236)	33.04		
(001235)	33.03	154				
(001236)	33.04	155	(001234)	33.02		
(001242)	33.05	160	(001227)	32.16	(001240)	32.18
(001243)	33.06	161				
(001245)	33.08	162				
(001246)	33.09	163	(001244)	33.07		
(001249)	33.10	164	(001242)	33.05		
(001250)	33.11	165				
(001252)	33.13	166				
(001253)	33.14	167	(001251)	33.12		
(001255)	33.15	170	(001249)	33.10		
(001258)	33.16	171	(001255)	33.15		
(001264)	33.18	172				
(001265)	33.19		(001270)	33.24		
(001267)	33.21	173				
(001269)	33.23	174				
(001270)	33.24	178	(001266)	33.20	(001268)	33.22
(001277)	34.01	200	(001255)	33.15		
(001286)	34.04	202				
(001287)	34.05		(001297)	34.09		
(001297)	34.09	209				
(001300)	34.10	210	(001240)	32.18	(001237)	33.04
(001302)	34.11		(001241)	35.19	(001271)	33.24
(001306)	34.13	211	(001303)	34.12		
(001308)	34.15	212				
(001312)	35.01	213	(001303)	34.12	(001309)	34.16
(001316)	35.02	214				
(001317)	35.03	218	(001307)	34.14	(001309)	34.16
(001322)	35.05	215				
(001323)	35.06	2150				
(001331)	35.09		(001333)	35.12		
(001333)	35.12	2154				
(001337)	35.15		(001339)	35.18		
(001339)	35.18	2155				
(001341)	35.19	219	(001321)	35.04	(001322)	35.05
(001346)	35.20	250				
(001352)	35.21	252	(001346)	35.20		

(001353)	35.22	253					
(001354)	35.23	254					
(001349)	35.24	251	(001346)	35.20			
(001350)	35.01	255	(001354)	35.23			
(001352)	35.03		(001353)	35.04			
(001353)	35.04	256					
(001355)	35.06		(001356)	35.07			
(001356)	35.07	257					
(001370)	35.09	258					
(001377)	35.10	260	(001352)	35.21	(001349)	35.24	
(001378)	35.11		(001380)	35.12			
(001380)	35.12	261					
(001383)	35.14	263					
(001391)	35.17		(001392)	35.19			
(001392)	35.19	266					
(001395)	35.20	267	(001382)	35.13			
(001398)	35.22	268					
(001400)	35.23	269	(001397)	35.21			
(001401)	35.24		(001404)	35.27			
(001403)	35.26	270					
(001404)	35.27	271	(001402)	35.25			
(001412)	35.28	280	(001346)	35.20	(001353)	35.22	(001354)
(001414)	35.30		(001416)	35.31			(001349)
(001416)	35.31	281					35.24
(001418)	35.33	282					
(001427)	35.35		(001429)	35.39			
(001429)	35.39	285					
(001433)	35.40	289	(001114)	30.13	(001124)	30.18	(001418)
							35.32

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE GJSI

(001443)	39.01	GJSI	(001295)	34.07-X	(001316)	35.02-X
(001450)	39.01	150				
(001462)	39.03		(001485)	39.05		
(001485)	39.05	151				
(001472)	39.08		(001476)	39.10		
(001476)	39.10	152				
(001482)	39.12	153				
(001474)	39.14		(001486)	39.15		
(001486)	39.15	154				
(001497)	39.18	160				
(001500)	39.19	199				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE GJTI

(001577)	42.01	GJTI	(001129)	31.03-X
(001578)	42.01	159		
(001586)	42.06		(001601)	42.08
(001601)	42.08	160		
(001606)	42.12	110		
(001613)	42.13	118	(001605)	42.11
(001641)	43.01	320	(001638)	43.05
(001642)	43.02	330		
(001634)	43.03	230	(001620)	43.08
(001635)	43.04	240	(001625)	43.12
(001638)	43.05	260	(001632)	43.16
(001639)	43.06	310		
(001619)	43.07	110	(001614)	42.14
(001621)	43.09	120		
(001623)	43.10	160	(001620)	43.08
(001624)	43.11		(001626)	43.13
(001626)	43.13	200		
(001627)	43.14	210	(001622)	43.09

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SWEEP		PAGE 7
CARD ID	PAGE/BOX	NAME	REFERENCES	(SOURCE SEQUENCE NO)	AND PAGE/BOX	
(001629)	43 15	220	(001625)	43 12		
(001644)	44 01	340	(001641)	43 01	(001638)	43 05
(001645)	44 02	350	(001641)	43 01		
(001647)	44 03	360	(001643)	43 02	(001640)	43 06
(001648)	44 04	370				
(001655)	44 06	400	(001614)	42 14	(001647)	44 03
(001657)	44 08	410				
(001657)	44 08		(001657)	44 09		
(001659)	44 11		(001661)	44 12		
(001661)	44 12	420				
(001666)	44 14	421				
(001686)	44 22		(001688)	44 25		
(001688)	44 25	81				
(001691)	44 26	499	(001665)	44 13		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CNSTC

(001709)	47 01	CNSTC	(000243)	7 06	X	
(001756)	47 01	1000				
(001760)	47 01	1001				
(001761)	47 04	1002	(001759)	47 02		
(001763)	47 06	1003				
(001763)	47 06		(001763)	47 07		
(001765)	47 09	1004				
(001765)	47 09		(001765)	47 10		
(001768)	48 01		(001769)	48 02		
(001769)	48 02	1006				
(001776)	48 05		(001780)	48 08		
(001780)	48 08	1009				
(001785)	48 11	1300				
(001787)	48 13	1301				
(001788)	48 14	1302	(001784)	48 10	(001786)	48 12
(001793)	48 18	1303				
(001794)	48 19	1304	(001792)	46 17		
(001795)	48 20	1305				
(001796)	48 21	1306				
(001798)	48 22	1307	(001795)	48 20		
(001801)	48 23	1308	(001794)	48 19	(001797)	48 21
(001803)	48 25	1309				
(001804)	48 26	1400	(001802)	48 24		
(001810)	48 29		(001811)	48 30		
(001811)	48 30	1200				
(001815)	48 32	1007	(001813)	48 31		
(001822)	49 01	1008	(001813)	48 31		
(001827)	49 03	1401				
(001829)	49 04	1009	(001820)	48 33	(001826)	49 02
(001835)	49 06	1201	(001833)	49 05		
(001836)	49 09	1202	(001836)	49 07		
(001845)	49 18	1207	(001836)	49 07		
(001849)	50 01	1208	(001833)	49 05	(001842)	49 09
(001853)	50 02	1209	(001833)	49 05	(001847)	49 18
(001858)	50 04	1010				
(001858)	50 05	1011	(001857)	50 03		
(001861)	50 07	1012				
(001862)	50 08	1013	(001860)	50 06		
(001864)	50 10	1014				
(001865)	50 11	1015	(001863)	50 09		
(001866)	50 12	1016				
(001869)	50 13	1017	(001865)	50 11		
(001870)	50 14	1018				
(001873)	50 15	1019	(001869)	50 13		
(001875)	50 17	1020				
(001877)	50 19	1021				
(001878)	50 20	1100	(001874)	50 16	(001876)	50 18
(001883)	51 01	1103				
(001885)	51 03	1104				
(001886)	51 04	1105	(001882)	50 22	(001884)	51 02

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP				
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAGE/BOX		
(001888)	51 06	1106						
(001890)	51 08	1107						
(001895)	51 09	1022	(001887)	51 05	(001889)	51 07		
(001897)	51 11	1023						
(001899)	51 13	102						
(001901)	51 14	1024	(001896)	51 10	(001898)	51 12		
(001903)	51 16	1025						
(001904)	51 17	1026	(001902)	51 15				
(001906)	51 19	1027						
(001908)	51 20	1028	(001905)	51 18				
(001909)	51 21	1029						
(001911)	51 22	1030	(001908)	51 20				
(001914)	51 23	1031	(001907)	51 19	(001908)	51 20	(001910)	51 21
(001915)	51 24	1032						
(001916)	51 25	1033	(001914)	51 23				
(001917)	51 26	1034						
(001918)	51 27	998	(001916)	51 25				
(001919)	51 28	999						
(001921)	51 29	1035	(001918)	51 27				
(001924)	51 30		(001929)	52 11				
(001926)	51 32	1036						
(001955)	52 01	1047	(001951)	52 08				
(001956)	52 02	1048	(001950)	52 07	(001953)	52 09		
(001957)	52 03	1049						
(001958)	52 04	1050						
(001940)	52 05	1211	(001933)	52 12				
(001948)	52 06	1212	(001933)	52 12	(001937)	52 13		
(001951)	52 08	1045						
(001952)	52 09	1046						
(001928)	52 10	1037	(001925)	51 31				
(001929)	52 11	1038	(001925)	51 31	(001927)	51 32		
(001935)	52 13	1210	(001933)	52 12				
(001961)	53 01	1051	(001957)	52 03				
(001965)	53 02	1052	(001956)	52 02	(001959)	52 04		
(001969)	53 04	1053						
(001971)	53 06	1054						
(001974)	53 07	1055	(001968)	53 03	(001970)	53 05		
(001975)	53 08		(001988)	53 21				
(001977)	53 10	1056						
(001978)	53 11	1057	(001976)	53 09				
(001980)	53 13	1058						
(001982)	53 15	1059						
(001983)	53 16	1060	(001979)	53 12	(001981)	53 14		
(001985)	53 18	1061						
(001987)	53 20	1062						
(001988)	53 21	1063	(001984)	53 17	(001986)	53 19		
(001992)	54 02		(002001)	54 09				
(001994)	54 04	1064						
(001996)	54 06	1065						
(001997)	54 07	1066	(001995)	54 05				
(002000)	54 08	1067	(001993)	54 03				
(002001)	54 09	1068						
(002006)	54 12	1069						
(002007)	54 13	1070	(002005)	54 11				
(002008)	54 14	1071						
(002009)	54 15	1072						
(002011)	54 16	1073	(002008)	54 14				
(002012)	54 17	1074	(002007)	54 13	(002010)	54 15		
(002014)	54 19	1075						
(002015)	54 20	1076	(002013)	54 18				
(002016)	54 21	1077						
(002017)	54 22	1078						
(002019)	55 01	1079	(002016)	54 21				
(002022)	55 02	1080	(002015)	54 20	(002018)	54 22		
(002024)	55 04	1081						
(002025)	55 05	1082	(002023)	55 03				
(002030)	55 07	1083						
(002031)	55 08	1084	(002029)	55 06				
(002032)	55 09	1085						
(002033)	55 10	1086	(002031)	55 08				
(002034)	55 11	1087						
(002036)	55 12	1088	(002033)	55 10				

CARD ID PAGE/BOX NAME REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)

(002037)	95.13		(002042)	95.17	
(002038)	95.14	1009			
(002039)	95.15	1000			
(002041)	95.16	1091	(002038)	95.14	
(002042)	95.17	1092	(002037)	95.13	(002040) 95.15
(002050)	95.22	1097			
(002064)	95.23	1098	(002050)	95.21	
(002066)	95.25	1109			
(002068)	95.27	1110			
(002071)	95.28	1111	(002065)	95.24	(002067) 95.26
(002073)	95.30	1112			
(002076)	95.31	1113	(002072)	95.29	
(002083)	95.33	1999			

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE ASDM

(002095)	90.01	ASDM	(000246)	7.07-X	
(002137)	90.01	107			
(002140)	90.03	100			
(002141)	90.04	109			
(002142)	90.05	110			
(002145)	90.06	111	(002139)	90.02	(002140) 90.03 (002141) 90.04
(002146)	90.07		(002194)	90.22	
(002148)	90.09	112			
(002153)	90.11	113	(002164)	90.14	
(002154)	90.12	114			
(002162)	90.13	110	(002152)	90.10	
(002164)	90.14	119	(002162)	90.13	(002183) 90.13 (002184) 90.14
(002165)	90.15	120			
(002156)	90.01	115	(002154)	90.12	
(002158)	90.03	116			
(002159)	90.04	117	(002157)	90.02	(002186) 90.16 (002189) 90.18
(002160)	90.05	121	(002186)	90.16	(002173) 90.07 (002174) 90.08 (002180) 90.12
(002171)	90.06	122	(002186)	90.16	
(002174)	90.08	123			
(002176)	90.09	124	(002174)	90.08	
(002178)	90.11	125			
(002179)	90.12	126	(002177)	90.10	(002191) 90.20 (002193) 90.21
(002183)	90.13	127	(002162)	90.13	
(002184)	90.14	128			
(002185)	90.15	129			
(002187)	90.17	130			
(002190)	90.19	131			
(002192)	90.21	132			
(002194)	90.22	139	(002148)	90.08	(002153) 90.11 (002154) 90.12 (002160) 90.04 (002169) 90.05
(002197)	90.23	140			
(002205)	90.26		(002217)	00.01	
(002217)	00.01	141			
(002225)	00.04	142			
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(002232)	00.07	200			
(002238)	00.11		(002240)	00.13	
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(002252)	00.18	205			
(002261)	00.19	210	(002231)	00.06	
(002267)	00.21	198			

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE YBSET

(002278)	03.01	YBSET	(000249)	7.00-X
(002312)	03.02		(002317)	03.04
(002317)	03.04	105		

(002323)	63 06	130																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE 552(S/C1)

(002468)	70 01	552	(001777)	48 06-X	(001789)	48 15-X
(002469)	70 01	90				
(002487)	70 03	91				
(002488)	70 05	92				
(002489)	70 06	93				
(002503)	70 09	94				
(002505)	70 10	99				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE VLOAD1

(002518)	73.01	VLOAD1	(002262)	80.20-X		
(002565)	73.02	15				
(002566)	73.03	8				
(002570)	73.04	14	(002584)	73.01		
(002574)	73.05	16	(002584)	73.01	(002565)	73.02 (002569) 73.03
(002576)	73.07	1003				
(002589)	73.11	1009	(002575)	73.06		
(002590)	73.12		(002648)	74.09		
(002601)	73.15	101	(002597)	73.14		
(002610)	73.18	102	(002597)	73.14		
(002632)	74.03	103				
(002648)	74.09	109	(002631)	74.02		
(002651)	74.11	10				
(002652)	74.12	11				
(002657)	74.13	199	(002650)	74.10	(002651)	74.11

CHART TITLE - NON-PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOX	
10000171	2.02	UNRECOGNIZED SYNTAX
10000251	2.06	UNRECOGNIZED SYNTAX
10000841	5.01	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10001161	5.19	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001171	5.20	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003201	10.13	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10007221	22.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10007211	22.12	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10010901	30.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10015701	42.01	UNDEFINED - 'READMS' EXTERNAL REFERENCE

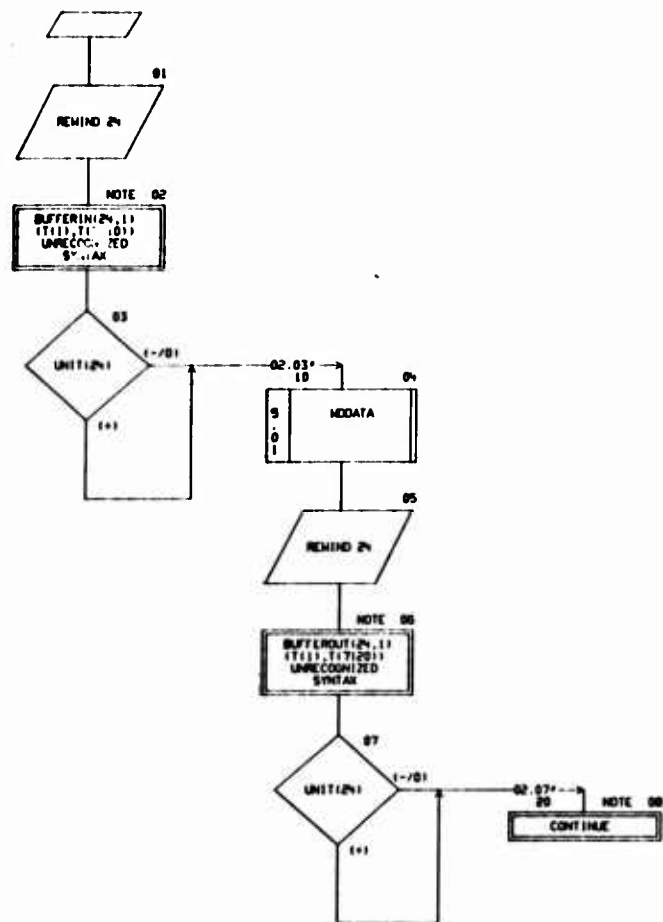
PROGRAM FLOW CHARTS

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CHART TITLE - INTRODUCTORY COMMENTS

```
*****  
*****PROGRAM OLAY16*****  
***PROGRAM FOR FOURTH OVERLAY OF WING/EMPENNAGE MODULE***  
DESIGN DATA FOR TORQUE-BOX ANALYSIS  
*****
```

CHART TITLE - PROCEDURES



05/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON PROCEDURAL STATEMENTS

PROGRAM OLAY16
COMMON T(7120)
COMMON /MISC/ NMISC(100)

06/10/76

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 04

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE MODATA*****

DESIGN DATA GENERATION CONTROL

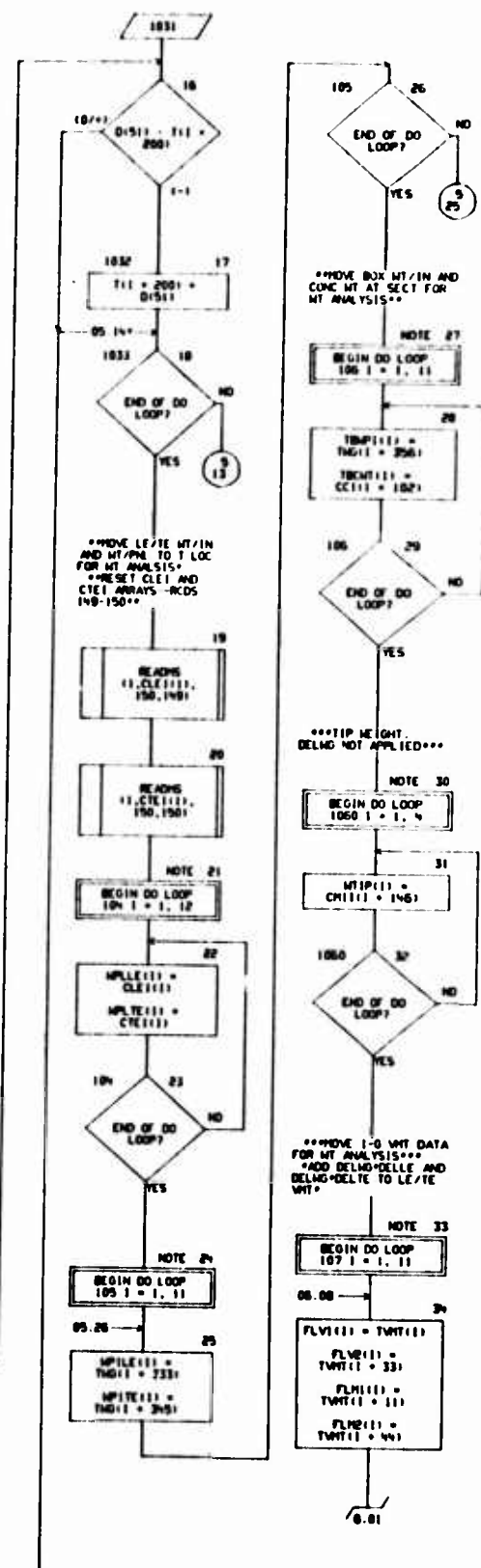
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CHART TITLE - SUBROUTINE HEDATA

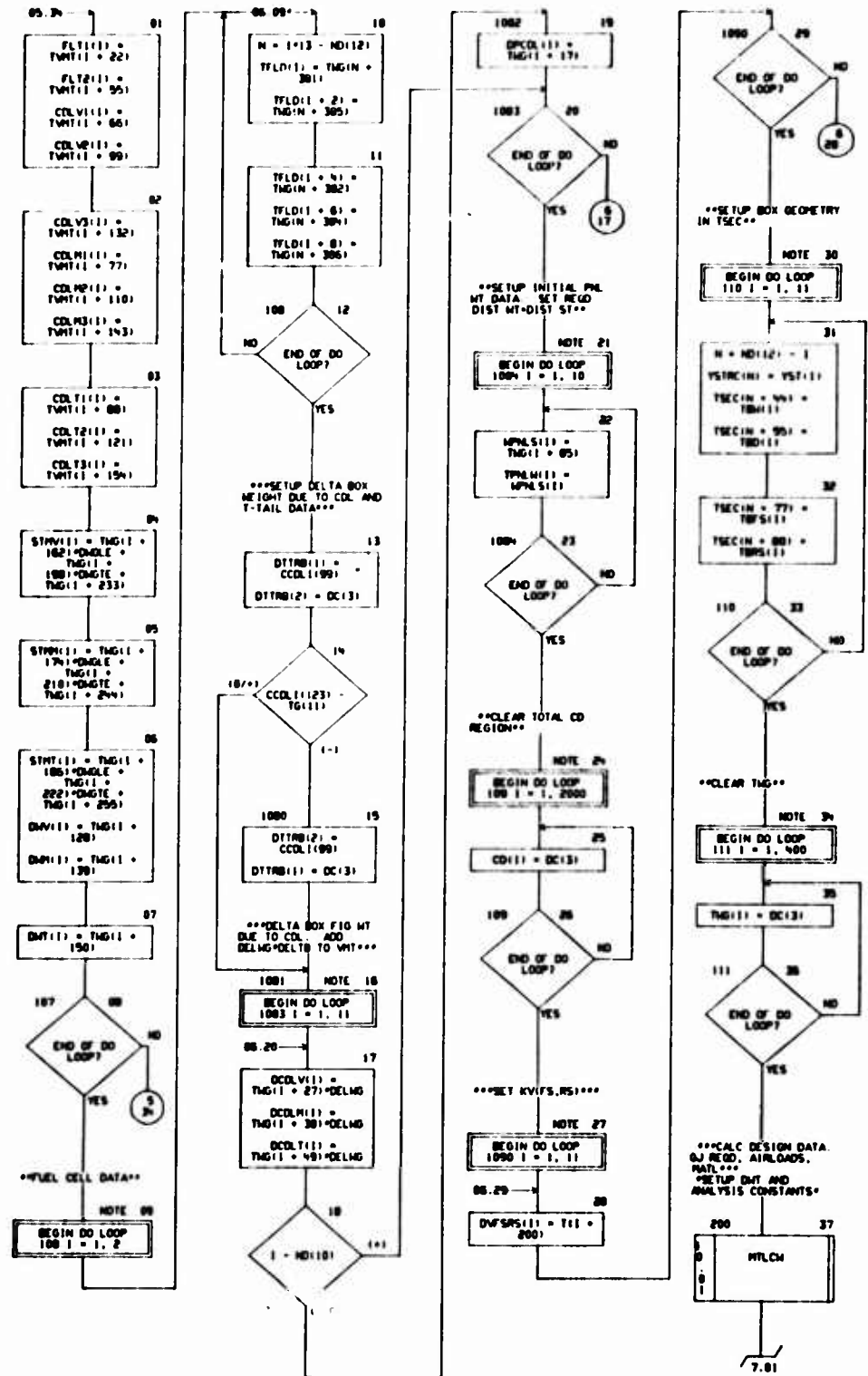


CHART TITLE - SUBROUTINE MODATA

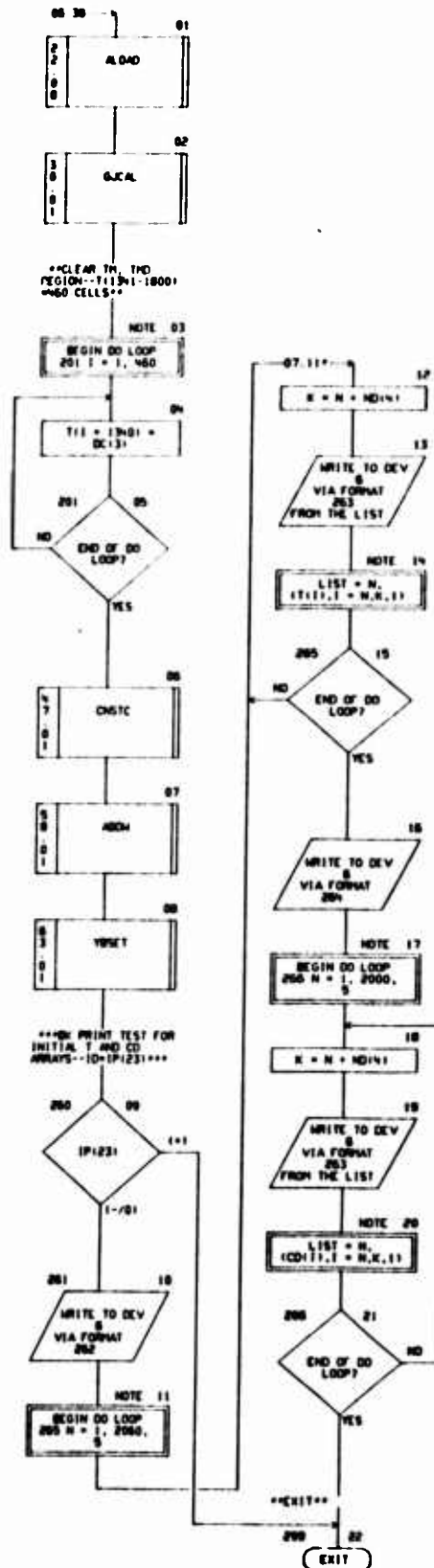


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(16220),D(2060),CD(2000),ND(100),DC(100),
TSEC(300),TG(300),TNG(400),CLE(150),CTE(150),CC(1300),TWT(250),
YST(111),YBP(111),XBP(111),TBO(111),TBM(111),TFLD(10),CH(1150),
MPLLE(12),MPLTE(12),MPILE(11),MPITE(11),TBMPI(11),TBCMT(11),
FLV(111),FLV2(111),FLM(111),FLM2(111),FLT(111),FLT2(111),
COLV(111),COLV2(111),COLV3(111),COLM(111),COLM2(111),COLM3(111),
COLT(111),COLT2(111),COLT3(111),STMV(111),STMH(111),STHT(111),
DMV(111),DMPI(111),DMT(111),MTIP(4),DTTRB(2),MPLS(10),TPNLM(10),
DPCOL(10),DCOLV(11),DCOLM(11),DCOLT(11),CCOL(150),
YSTRC(111),TBS(111),TBR5(111),DMVSR5(111),
C10Y(150)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TSEC(1),CD(1501)),(TG(1),T(1001)),
(TNG(1),T(1301)),(CLE(1),CD(651)),(CTE(1),CD(801)),
(CC(1),CD(1651)),(TWT(1),CD(511)),(YSTRC(1),TSEC(1661)),
(YST(1),T(511)),(YBP(1),T(5001)),(XBP(1),T(4091)),(TBO(1),T(5301)),
(TBM(1),T(1942)),(TBS(1),T(1531)),(TBR5(1),T(1651)),
(TFLD(1),T(631)),(MPLLE(1),T(2051)),(MPLTE(1),T(2071)),
(MPILE(1),T(2631)),(MPITE(1),T(2741)),(TBMPI(1),T(7451)),
(TBCMT(1),T(7091)),(DMV(1),T(5981)),(DMPI(1),T(6091)),(DMT(1),T(6201)),
(STMV(1),T(8111)),(STMH(1),T(8221)),(STHT(1),T(8331)),
(C10Y(1),T(5011))
EQUIVALENCE (FLV(1),T(4451)),(FLV2(1),T(4701)),(FLM(1),T(4561)),
(FLM2(1),T(4081)),(FLT(1),T(4671)),(FLT2(1),T(4191)),
(COLV(1),T(3091)),(COLM(1),T(3201)),(COLT(1),T(3311)),
(COLV2(1),T(3421)),(COLM2(1),T(3531)),(COLT2(1),T(3641)),
(DTTRB(1),T(6661)),(DPCOL(1),T(2201)),
(DCOLV(1),T(2301)),(DCOLM(1),T(2411)),(DCOLT(1),T(2521)),
(CCOL(1),CD(1501)),(CH(1),CD(1251)),
(MPLS(1),T(8451)),(TPNLM(1),T(8561)),(MTIP(1),T(6411)),
(BELND,T(1071)),(DMOLE,T(1031)),(DMGTE,T(1041)),(DMVSR5(1),CD(16241)),
(COLV3(1),T(3751)),(COLM3(1),T(3861)),(COLT3(1),T(3971))
262 FORMAT (62H) ***DESIGN DATA CONTROL PROGRAM-- INITIAL T AND CD AR
      RAYS***,27X,21H** MODATA - IP(23) **/64H  T )
263 FORMAT (1H 14,9E10.0)
264 FORMAT (84H CD )

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08/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 09

CHART TITLE - INTRODUCTORY COMMENTS

****SUBROUTINE MLCW****

MATERIAL PROPERTIES EVALUATION CONTROL - METALLIC DESIGNS

CHART TITLE - SUBROUTINE MTLCH

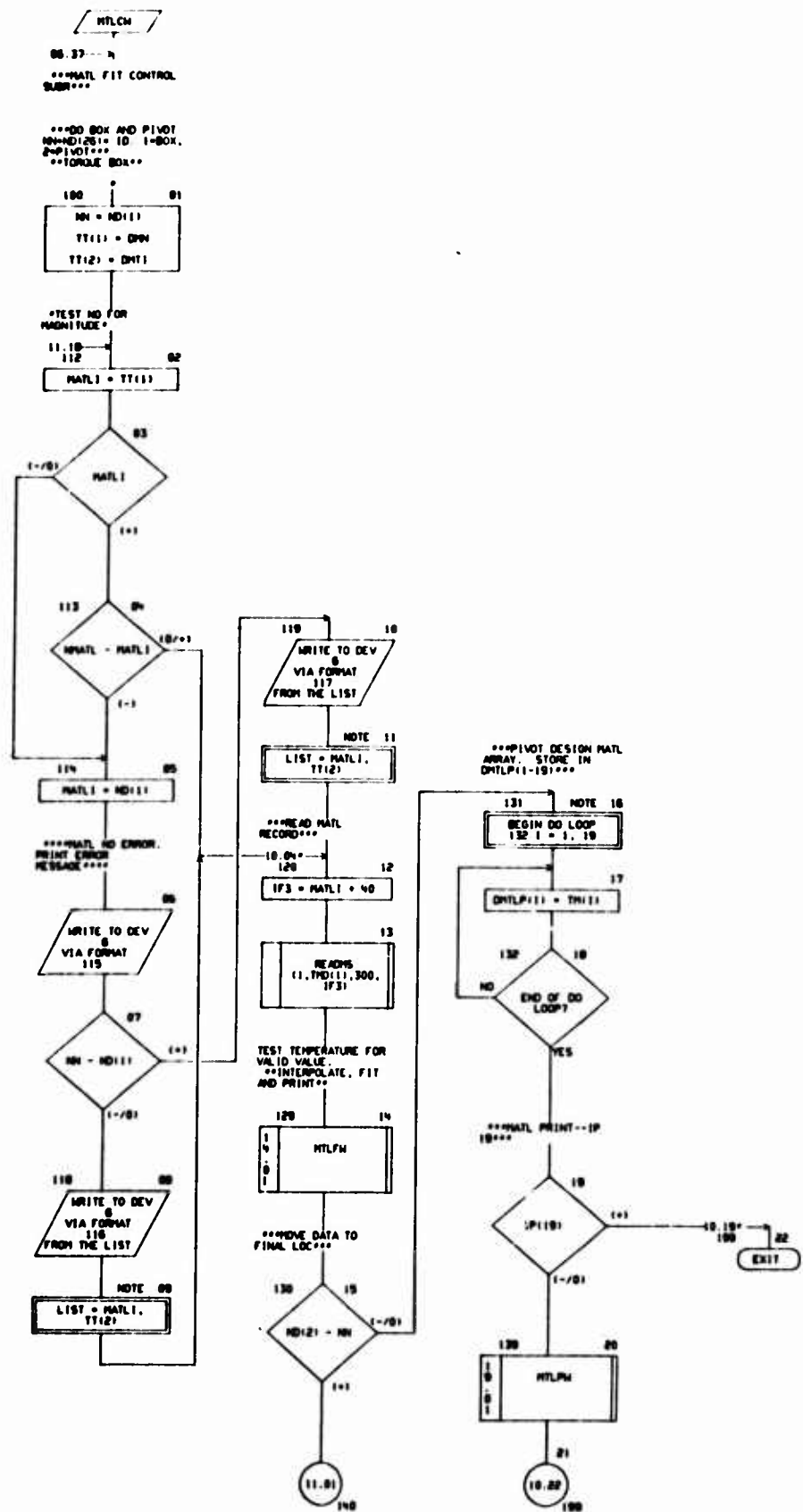


CHART TITLE - SUBROUTINE HTLCH

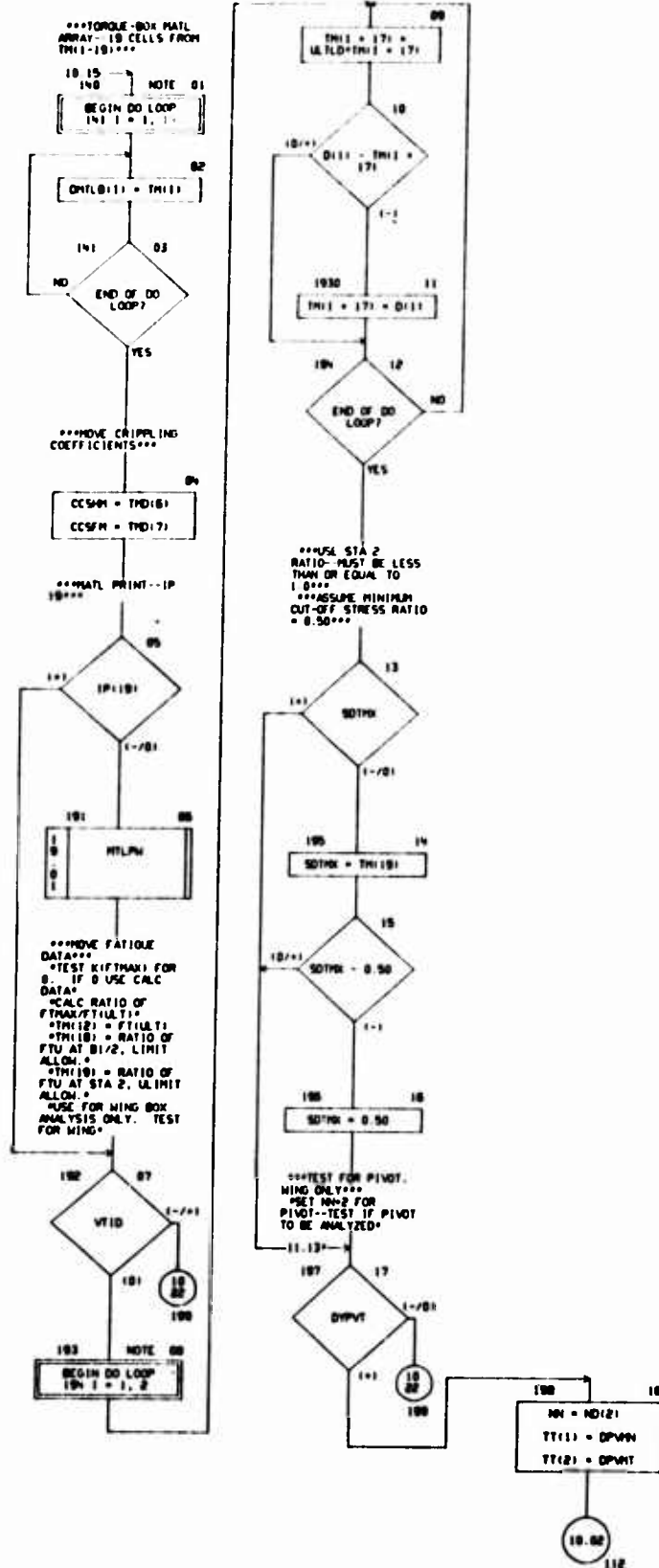


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T(6220)
COMMON /IPRINT/ IP(80)
DIMENSION D(2060),CD(2060),ND(100),DC(100),
TT(24),DHTLB(19),DHTLP(19),
THD(300),TH(180)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TT(1),T(1317)),
(TH(1),T(1841)),(THD(1),T(1341)),
(DPW,D(258)),(DHT,D(259)),(DPWH,D(196)),(DPWT,D(197)),
(DPYVT,D(200)),
(CCSM,T(199)),(CCSM,T(200)),
(DHTLP(1),CD(1905)),
(BDTH,D(386)),(ULTD,D(122)),
(VTID,D(209)),(DHTLB(1),T(201)),
(INMATL,ND(59)),(MATL,ND(21)),(1,ND(31)),(NN,ND(26)),(173,ND(92))
115 FORMAT (48H ***MATH INPUT ERROR. ASSURED MATH NO. 1.*** )
116 FORMAT (22H ***TORQUE-BOX--MATH=13,6H TEMP=F7.1)
117 FORMAT (17H ***PIVOT--MATH=13,6H TEMP=F7.1)

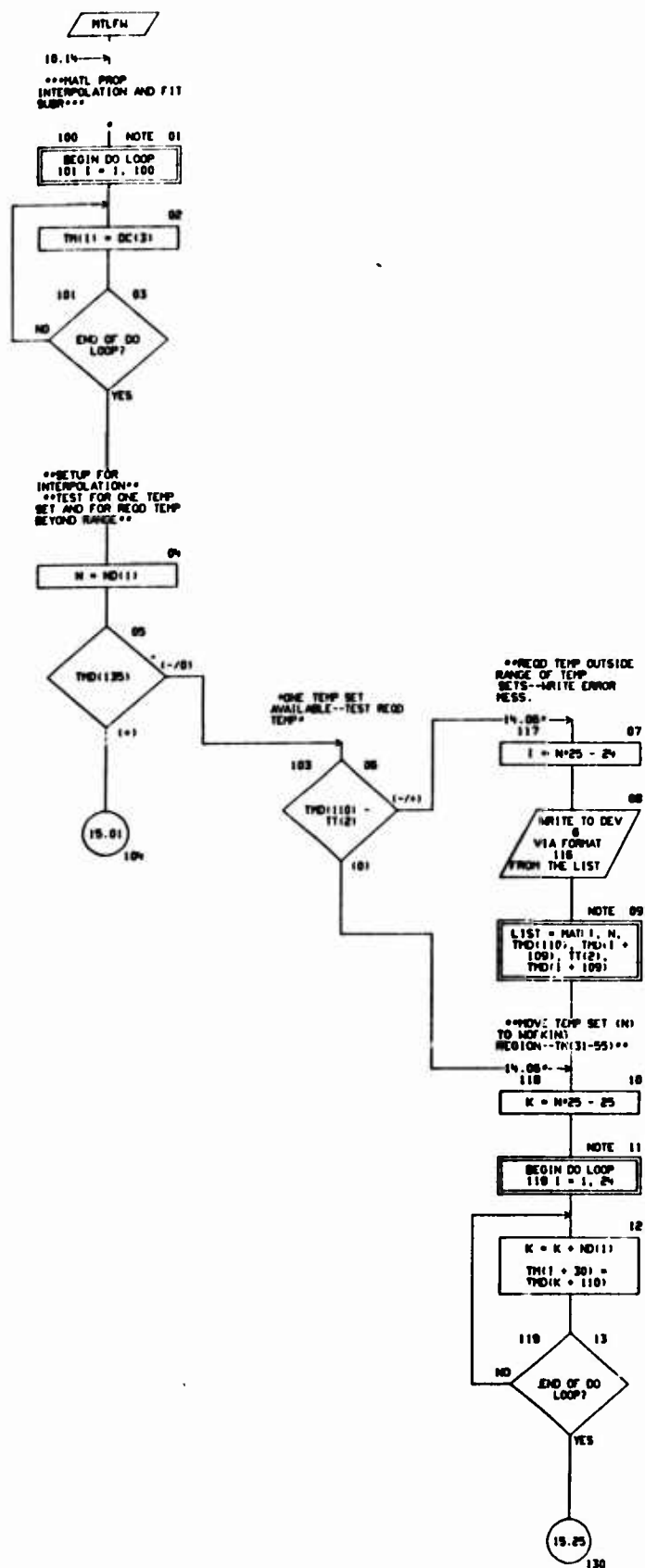
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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE HTLFW*****

CURVE FIT FOR MATERIAL STRESS-STRAIN CURVE - METALS

CHART TITLE - SUBROUTINE MTLFW



1434

[illegible]

CHART TITLE - NON-PROCEDURAL STATEMENTS

```
COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION DC(100),
THD(300),TH(160),
TT(24)
EQUIVALENCE (DC(1),D(140)),
(TMD(1),T(134)),(TM(1),T(164)),(TT(1),T(137)),
(MATL1,ND(2)),
(I,ND(3)),(N,ND(30)),(K,ND(20)),(L,ND(20))
115 FORMAT (30H- ***MATL TEMPERATURE ERROR. MATL NO.FN.1.3TH RECD TEM
P LESS THAN SET (1) TEMP OF ,F7.1,6H DEG ***,//14X,12H *RECD TEMP=
F7.1,20H DEG. ASSUMED TEMP=F7.1,6H DEG *)
116 FORMAT (30H- ***MATL TEMPERATURE ERROR. MATL NO.FN.1.50H. RECD T
EMP OUTSIDE RANGE OF TEMP SETS ON FILE***,10X,11,30H TEMP SETS ON
FILE--MIN TEMP=F7.1,16H DEG., MAX TEMP=F7.1,6H DEG. ,//14X,12H *
RECD TEMP=F7.1,20H DEG. ASSUMED TEMP=F7.1,6H DEG. *)
```

06/10/74

AUTOFLOW CHART SET - SHEEP HING AND EMPENNAGE MODULE - PAGE 10

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE HTLPH*****

MATERIAL PROPERTY DATA PRINT - METAL

CHART TITLE - SUBROUTINE HTLPM

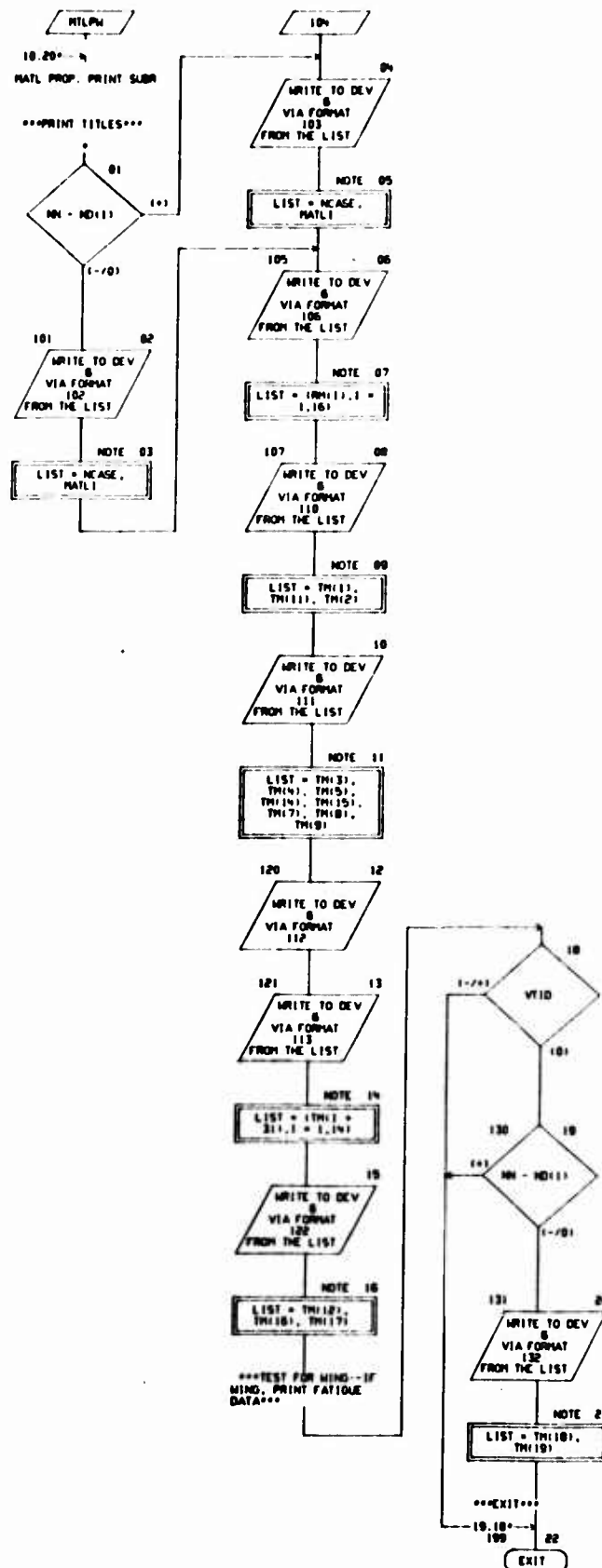


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION
TH(200),
RH(16),THD(300),DC(100)
EQUIVALENCE IDC(1),D(1401),
(TMD(1),T(1341)),(TH(1),T(1641)),
(RH(1),THD(205)),
(VT(10),D(209)),
(INCAGE,ND(80)),(INPAGE,ND(85)),
(MATL1,ND(21)),(INN,ND(26)),I,ND(31))
102 FORMAT (10H) CASE 14,13X,4SH --2-TORQUE-BOX MATERIAL DATA MAT
L NO 13,4H---,16X,20H** MTLPM - (P(19) **)
103 FORMAT (10H) CASE 14,13X,3H --PIVOT MATERIAL DATA MATL NO 1
3,4H---,22X,20H** MTLPM - (P(19) **)
106 FORMAT (1H0BA10,1H BA10)
110 FORMAT(12H) TEMP =F8 2,12H DENSITY=F7.4,6H MU=F7.4,7/96H
A B E
E(RT) G(RT) I
111 FORMAT (16H) COMPRESSION 1X,2E10 0.3F14.1,7/16H TENSION 1X
,2E10 0.7F14.1)
112 FORMAT (102H) EPS(P) EPS(Y) F(P)
F(2) F(3) F(4) F(Y) I
113 FORMAT (16H) COMPRESSION 1X,2F12 0.5F12.1,7/16H TENSION 1X
,2F12 0.5F12.1)
122 FORMAT (23H) FTU=F8 1,6H FSU=F8 1,7H FBU=F8 1)
132 FORMAT (39H) FTMAT(ALL01)---B1/2-F8 3,4H FTU,22H
FTMAT(ALL01)---STA 2-F8 3,4H FTU)

```


CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE ALDAD*****

DESIGN AIRLOAD DATA PROCESSING

CHART TITLE - SUBROUTINE ALOAD

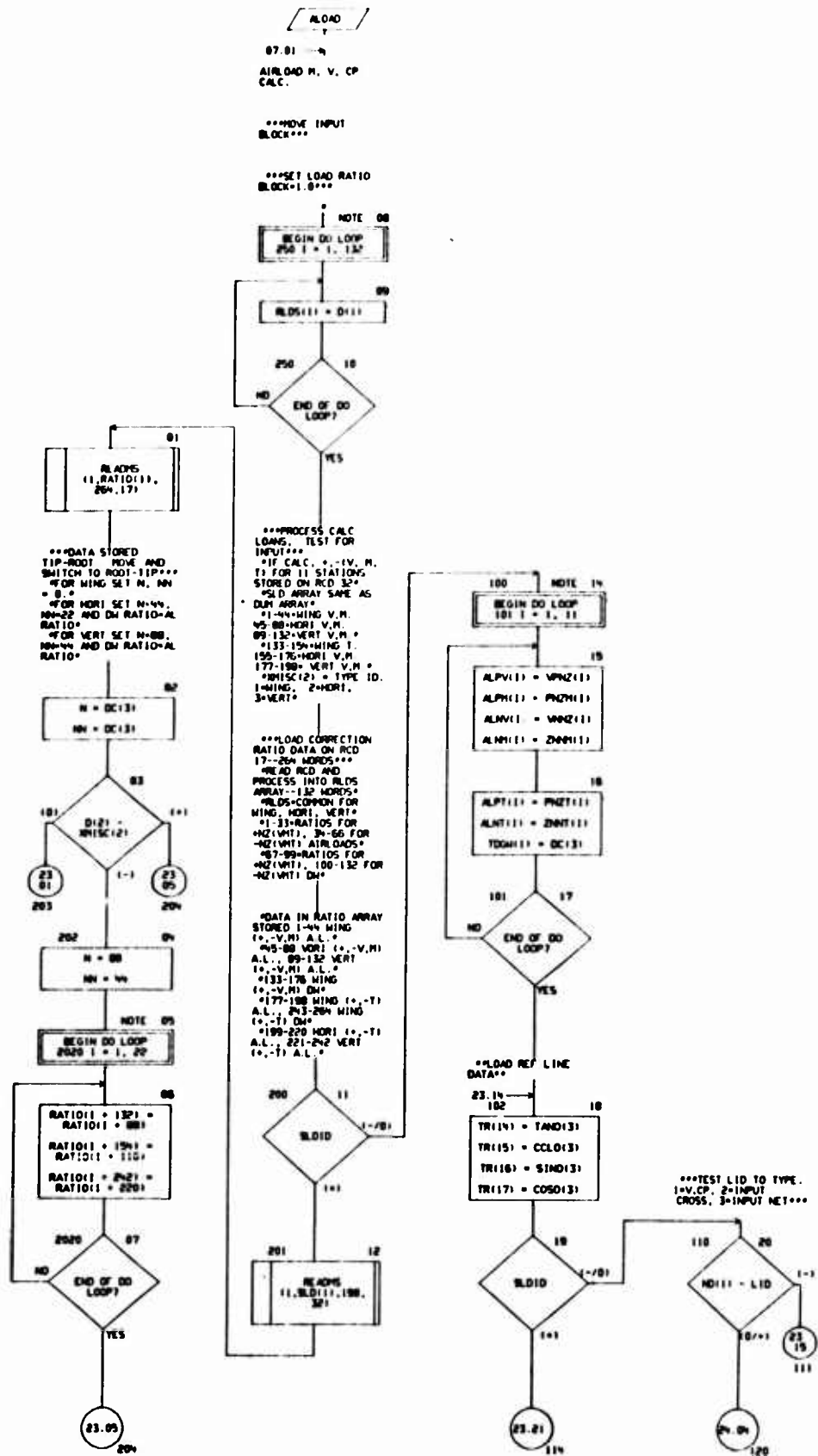
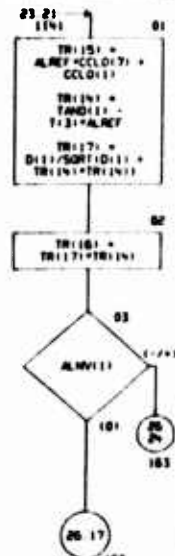


CHART TITLE - SUBROUTINE ALDAD

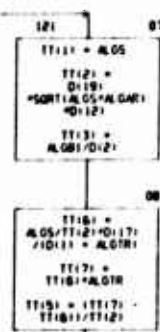
***LOAD REF INPUT
PER CENT CHORD ***
SETUP EQUATION
CONSTANTS FOR LD
ROTATION/TRANSLATION



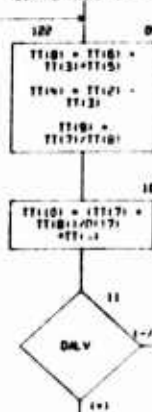
***SHEAR CP TYPE.
CALC V.R. TEST
ALIGNMENT INPUT
V, CP***



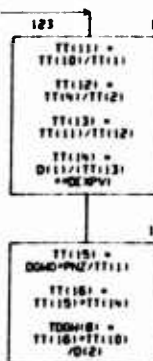
***SEPARATE HING
GEOM. FOR AIR
LOADS ***



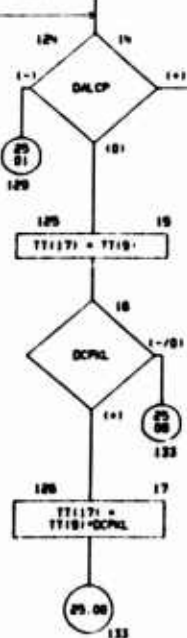
*** EXPOSED TR AND S
TEST FOR INPUT V ***



*** CALC VIEWP ***



***TEST SPANNISE
C.P.***
0=ASSUME -REF TO
B/2 ***REF TO EMP
B/2



***INPUT C.P. TEST
B.P. OR PER CENT EMP.
SPAN***

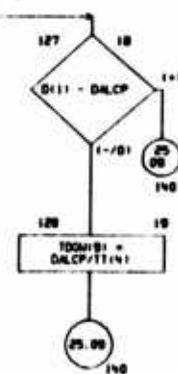
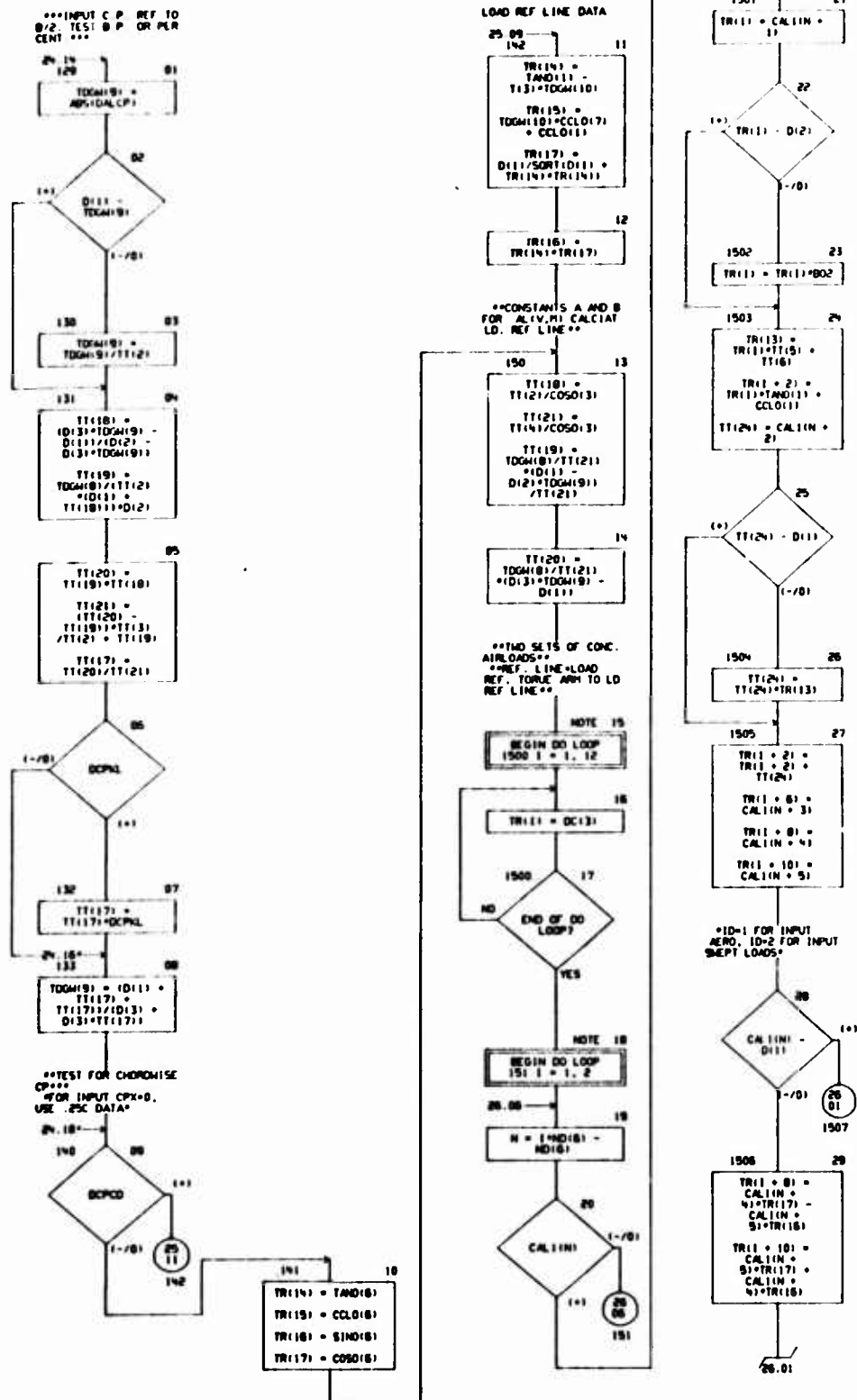


CHART TITLE - SUBROUTINE ALOAD



1445

CHART TITLE - SUBROUTINE ALDAD

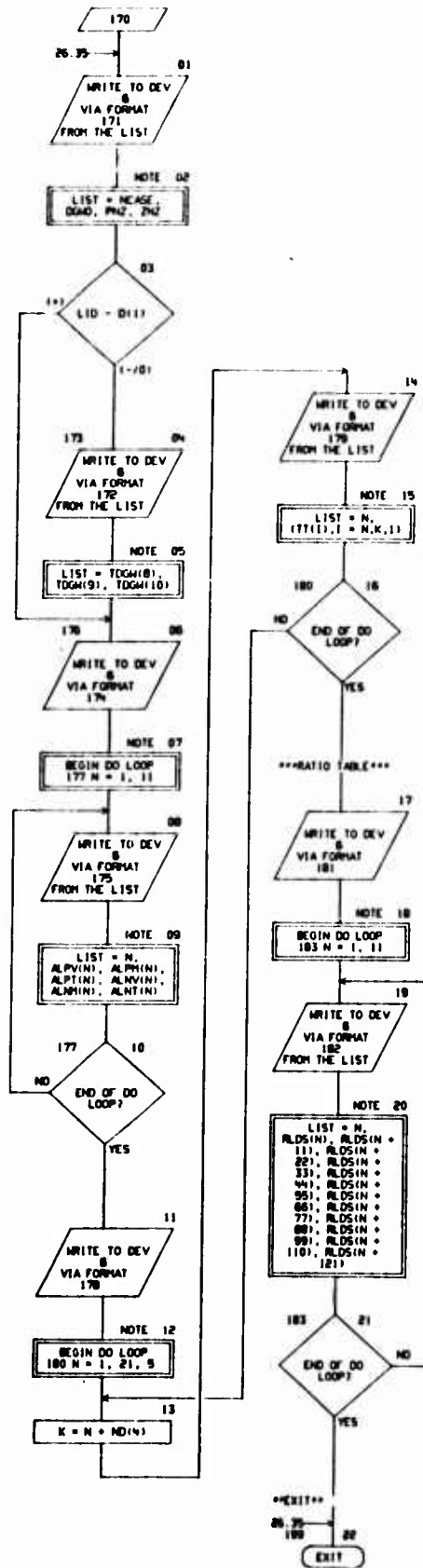


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2060),D(2060),CD(2000),ND(100)
COMMON /IPRINT/ IP(80)
COMMON /MISC/ XMISC(100)
DIMENSION DC(100),TSEC(300),TDGH(11),TT(24),
  PHZ(11),VPHZ(11),WPHZ(11),ZPHM(11),
  ALPV(11),ALPH(11),ALNV(11),ALNM(11),
  CAL(112), TR(17),TO(300),TAND(8),CCLO(8),SIND(6),COSO(6),
  PNZT(11),ZNNT(11),ALPT(11),ALNT(11),
  SLD(198),
  RLDS(132),RATIO(204),
  YSTRC(11),BKPR(14)
EQUIVALENCE (DC(1),D(1401)), (TSEC(1),CD(1501)), (TDGH(1),T(1430)),
  (TT(1),T(1317)), (YSTRC(1),TSEC(166)), (DGHD,D(105)),
  (PHZ,D(185)), (ZPHZ,D(186)), (DALV,D(255)), (DALCP,D(256)),
  (DCPCD,D(257)), (DCPKL,D(233)), (DEXPV,D(232)),
  (ALGS,D(235)), (ALGAR,D(236)), (ALOTR,D(237)), (ALOB1,D(238)),
  (PHZH(1),D(260)), (VPHZ(1),D(687)), (WPHZ(1),D(698)), (ZPHM(1),D(709)),
  (TAND(1),T(122)), (CCLO(1),T(131)), (SIND(1),T(140)),
  (ALPV(1),T(594)), (ALPH(1),T(565)), (ALNV(1),T(576)), (ALNM(1),T(587)),
  (BKPR(1),D(147)), (CKHOL,D(392))
EQUIVALENCE (BO2,T(112)), (BS1,T(115)), (BEP,T(96)), (CR,T(52)),
  (CTIP,T(37)), (TANAC,T(36)), (NAPEA,D(240)), (DPCEA,D(127)),
  (CAL(1),D(220)), (TR(1),T(1300)), (TO(1),T(1001)),
  (PHZT(1),D(1019)), (ZNNT(1),D(1030)),
  (ALPT(1),T(877)), (ALNT(1),T(888)),
  (COSO(1),T(146)), (COTEA,T(152)), (ALREF,D(239)),
  (SLD1D,D(205)), (SLD(1),CD(795)), (AC1D,D(1430)),
  (RLDS(1),CD(1400)), (RATIO(1),CD(532)),
  (MPAGE,ND(85)), (MCSEC,ND(68)),
  (IN,ND(31)), (IK,ND(30)), (I,ND(29)), (LID,ND(54)), (INCASE,ND(60))
171 FORMAT(1H,5X,4HCASE,14,20X,32H--BASIC LIMIT AIRLOAD DATA--.,
  24X,20H--ALOAD - IP(20) ---/1H,10X,5HDGHD=,F8.1,8H +NZ=,
  F8.3,8H -MZ=F8.3)
172 FORMAT(8H0 V=F8.1,15H LB/SIDE CP(Y)=F8.4,12H B/2 CP(X)=F8.4,
  8H C(1) )
174 FORMAT(8H0 STA +V(LIM) +H(LIM) +T(LIM) -V(LIM)
  -H(LIM) -T(LIM) )
175 FORMAT(1H,4X,13,F10.1,F13.1,F12.1,F11.1,F13.1,F12.1)
176 FORMAT(8H0 TT )
178 FORMAT(1H,14,9E18.8)
181 FORMAT(1H0,35X,20H--LOADS SCALING RATIOS--//21X,
  14H1AIRLOAD RATIOS,30X,17H0EADHEIGHT RATIOS/
  102H STA R(+V) R(+H) R(+T) R(
  -V) R(-H) R(-T) R(+V) R(+H) R(+T) R(-V) R(-H) R(
  -T))
182 FORMAT(1H,13,8F8.4,2X,8F8.4,

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05/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 29

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE QJCAL*****

REQD FLUTTER QJ EVALUATION AND CONTROL

CHART TITLE - SUBROUTINE GJCAL

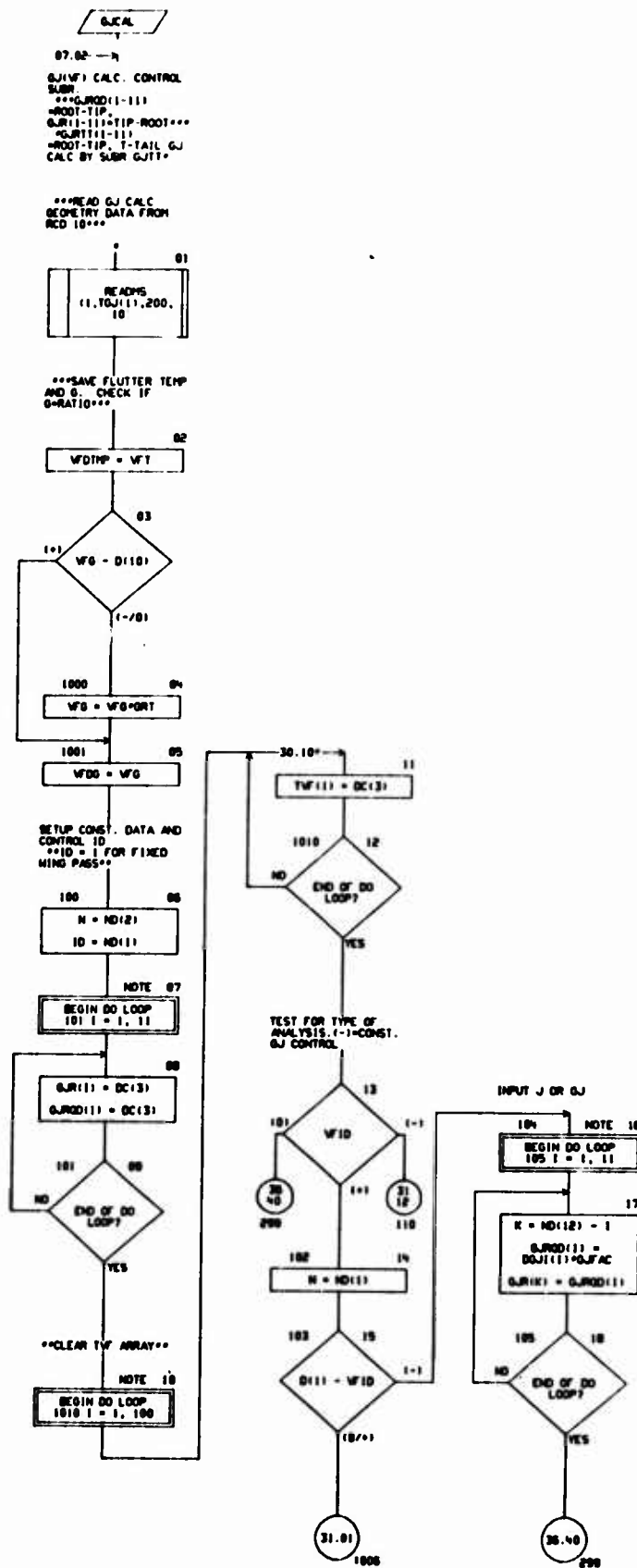


CHART TITLE - SUBROUTINE GJCL

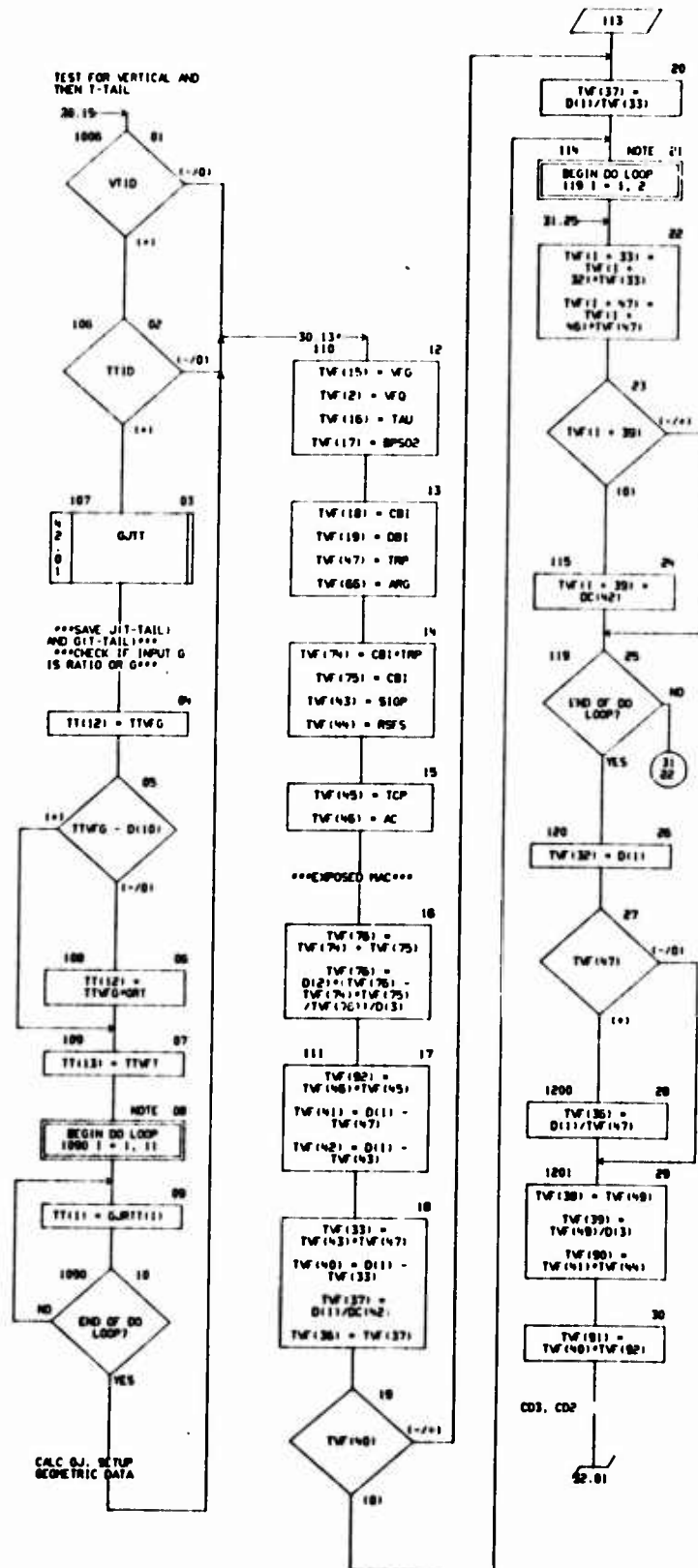
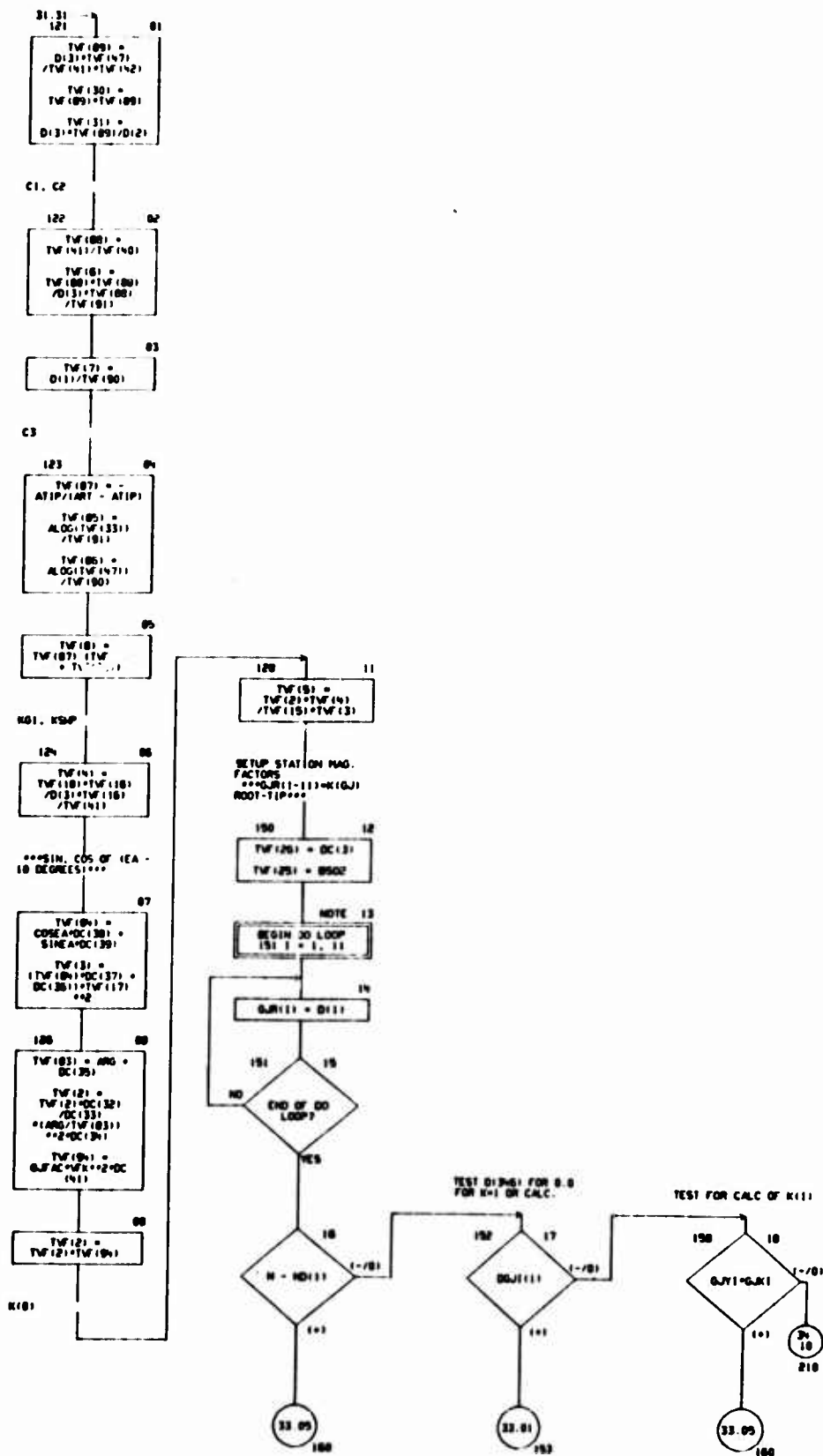


CHART TITLE - SUBROUTINE GJAL





00V-TAIL--CHECK FOR
T-TAIL 22

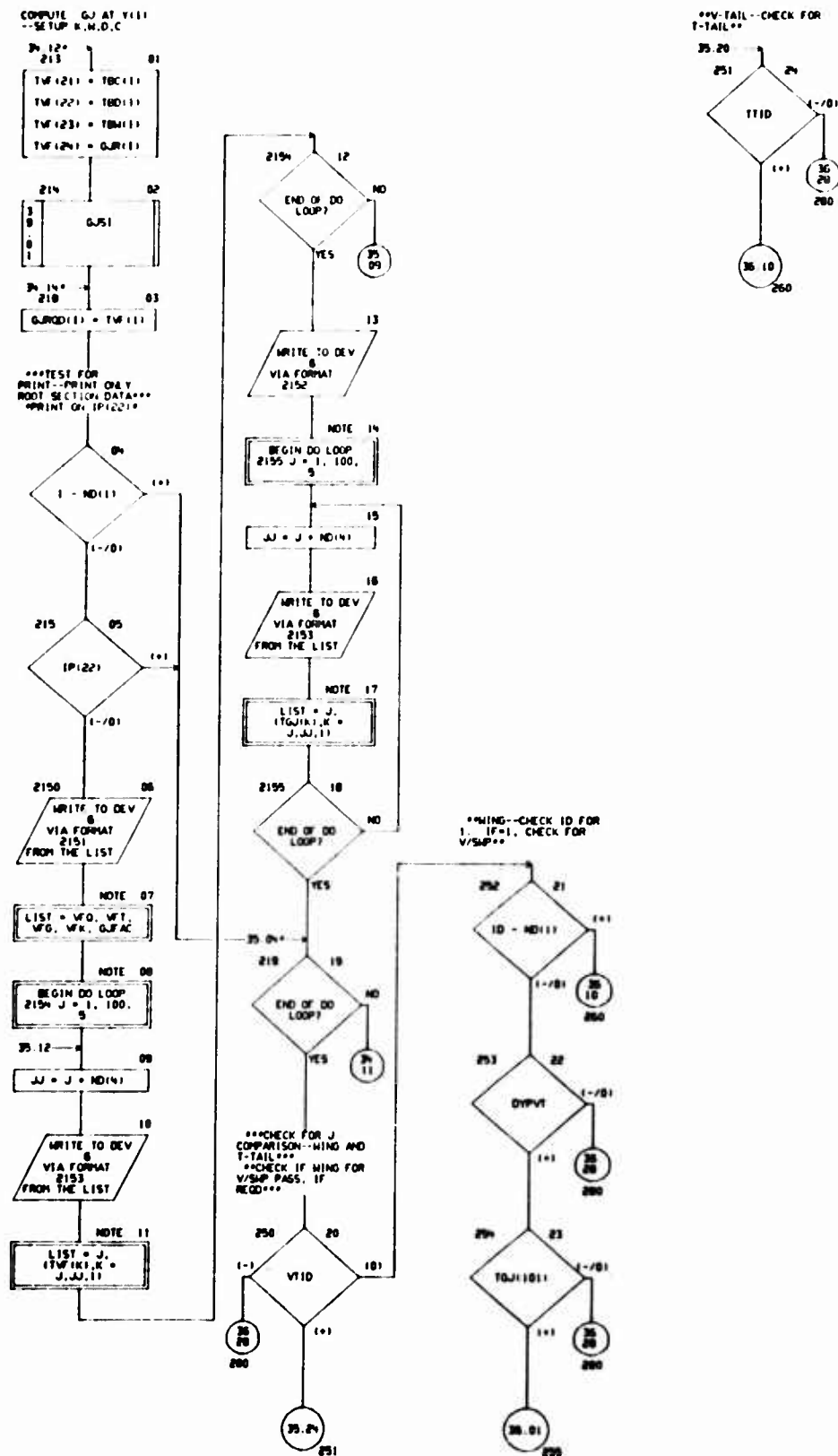


CHART TITLE - SUBROUTINE GJAL

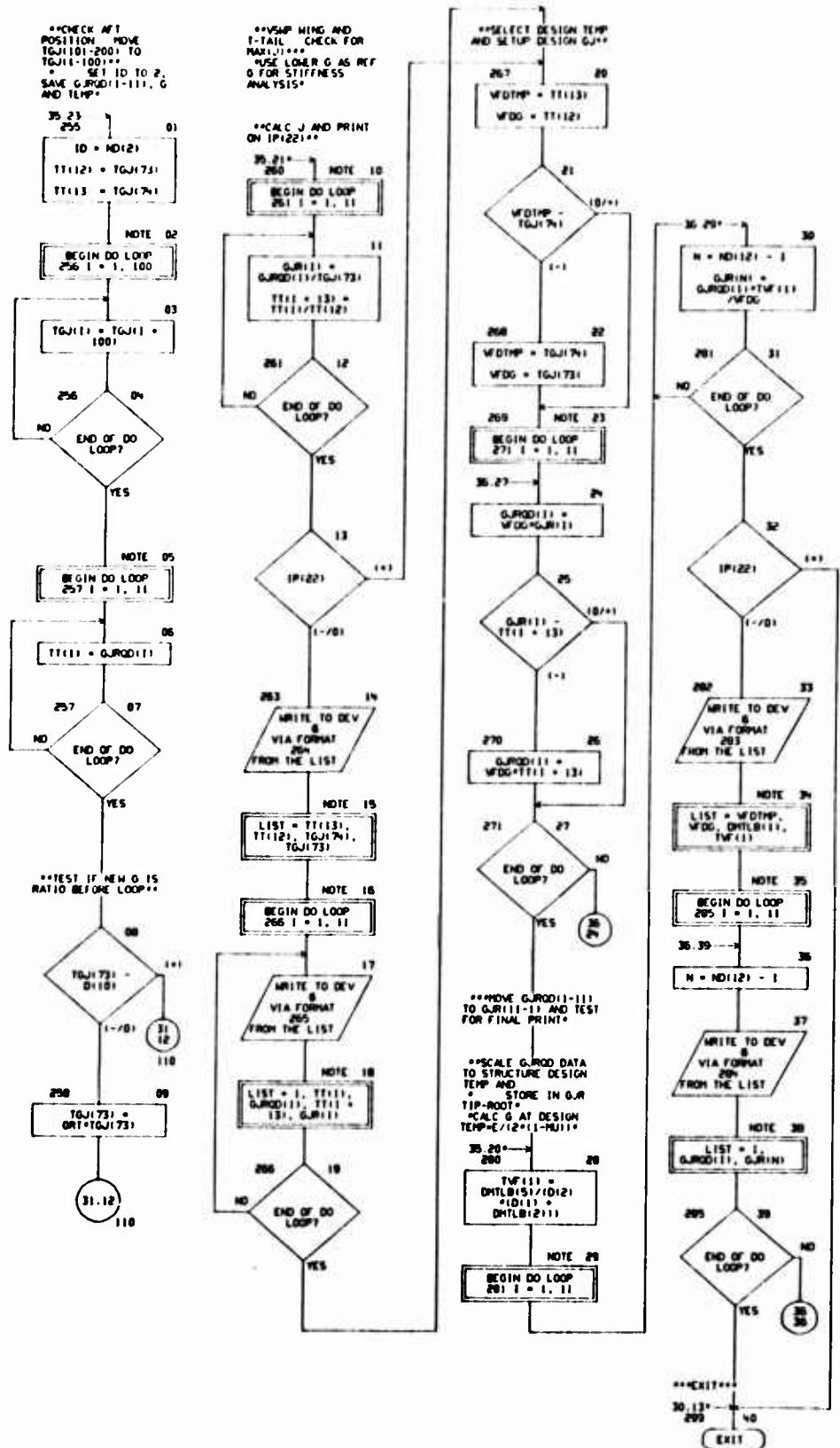


CHART TITLE - NON PROCEDURAL STATEMENTS

```

COMMON TCOM(620)
COMMON /PRINT/ IP(80)
DIMENSION T(2060), D(2060), CD(2000), ND(100), DC(100), TSEC(300),
TVF(100), TT(24), TGJ(200),
YS(11), TBH(11), TBO(11), TBC(11),
GJRQD(11), DGJ(11), GJR(11), GJRT(11),
DHTLB(10)
EQUIVALENCE (T(1),TCOM(1)), (D(1),TCOM(2061)), (CD(1),TCOM(4121)),
, (ND(1),TCOM(6121))
EQUIVALENCE (DC(1),D(1401)), (TSEC(1),CD(1501)), (TT(1),T(1317)),
(TVF(1),T(1961)), (TGJ(1),T(1761)), (DHTLB(1),T(201)),
(GJRQD(1),T(669)), (DGJ(1),D(346)), (GJR(1),TSEC(67)),
(YS(1),TGJ(27)), (TBH(1),TGJ(38)), (TBO(1),TGJ(49)),
(TBC(1),TGJ(60)), (ARO,TGJ(2)), (BSO2,TGJ(8)), (BEXP,TGJ(9)),
(BPSO2,TGJ(10)), (BSIO2,TGJ(11)), (CB1,TGJ(12)), (DB1,TGJ(13)),
(ITRP,TGJ(14)), (TCP,TGJ(15)), (SIGP,TGJ(16)), (TAU,TGJ(17)),
(RSFS,TGJ(18)), (AC,TGJ(24)), (COSEA,TGJ(20)), (SINEA,TGJ(19)),
(ATIP,D(1318)), (ART,D(1317)), (ORT,DHTLB(15)),
(VFID,D(1251)), (VTID,D(1269)), (TTID,D(1357)), (TTVF,D(1338))
EQUIVALENCE (VFX,TGJ(71)), (VFO,TGJ(72)), (VFG,TGJ(73)),
(VFT,TGJ(74)), (GFAC,TGJ(75)),
(GJVI,TGJ(76)), (GJVO,TGJ(77)), (GJVI,D(1314)), (GJKO,D(1316)),
(DYPMI,D(1201)), (VFDIMP,T(196)), (VFOG,T(197)),
(ITTFT,D(1335)),
(GJRT(1),T(668))
2151 FORMAT (34H1 ---FLUTTER ANALYSIS DATA---,50X,20H** GJCAL - IP
(22) **//10H VFO=F7.1,BH VFT=F7.1,BH VFG=F10.1,BH VFX=F7.4
,BH GFAC=F7.4, //8H TVF)
2152 FORMAT (6H0 TGJ)
2153 FORMAT (1H 2X,13,5E10 B)
204 FORMAT (42H1 ---GJ AND J COMPARISON DATA---, //8X,BHTEMP(1)
=F7.1,12H DEG. G(1)=F10.1,4H PSI, //8X,BHTEMP(2)=F7.1,12H DEG. G(
2)=F10.1,4H PSI, //50H STA GJ(1) GJ(2) J
(1) J(2))
205 FORMAT (5X,12,2F10.1)
203 FORMAT (32H0 ---DESIGN GJ DATA---, //20H FLUTTER DES
IGN TEMP=F7.1,BH DEG. ,10H DESIGN G=F11.1,4H PSI, //20H STRUCT.
DESIGN TEMP=F7.1,BH DEG. ,10H DESIGN G=F11.1,4H PSI, //44H0
STA GJ(RECD) GJ(SCALED))
204 FORMAT (11X,12,2F10.1)

```

06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 30

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE GJS*****

FLUTTER GJ CALCULATION AT STATION (1)

CHART TITLE - SUBROUTINE GJ51

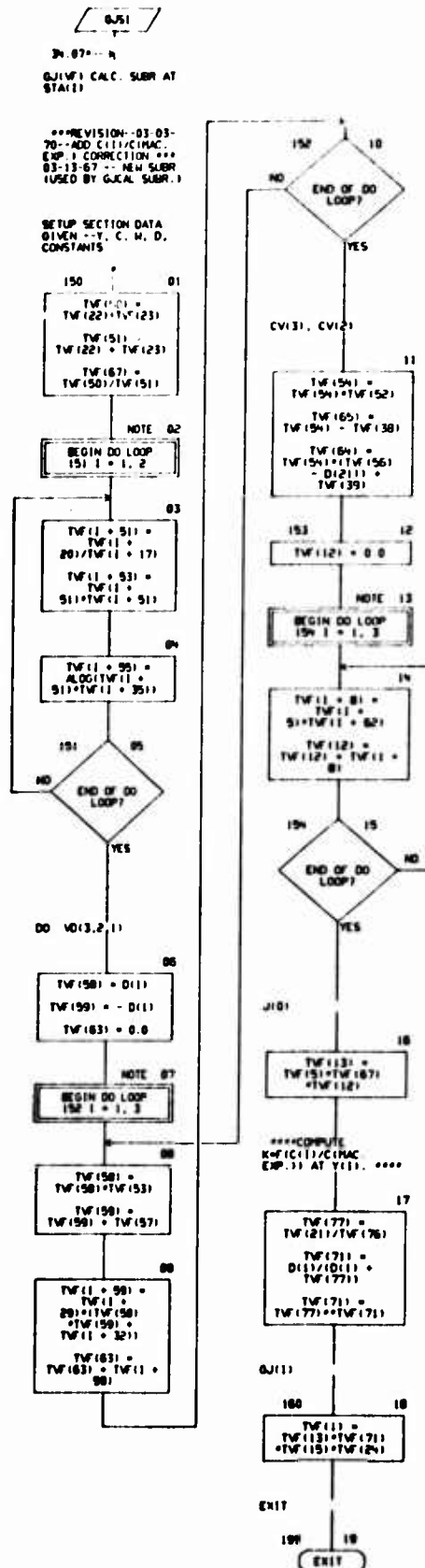


CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION TW(100)
EQUIVALENCE (TW(1),T(155))

CHART TITLE - INTRODUCTORY COMMENTS

```

SUBROUTINE GJTT
*****
      TORSIONAL STIFFNESS REQUIRED TO PREVENT FLUTTER OF T TAILS
      WRITTEN FEBRUARY 72 FROM INFORMATION DEVELOPED BY CHUCK MOODSON

      COL(GJ) = CTT*ESUBE*Q/144.0*SM**2/(CAVW)**2 * YINT/QD *
      ( ROW(DX)*COL(5/A1) ) * COL(1A/5)

      WHERE -
      CTT FROM GRAPH CTT VS MACH NO. FOR VARIOUS DIHEDRAL ANGLES
      IN**4/ LB. SEC.**2 - - - ORIGINAL FOR 0 AND 15 DEG.
      Q = LB/SQ.FT. SM=1.15, 0*SM**2=D(337)
      ESUBE = EFFECTIVE ECCENTRICITY OF VERTICAL TAIL
      = K / (1.+0.0/AR)**2 * (0.4+0.7*COS(SHEEP OF EA
      - 10. DEG.)) * Q/QD

      JFAC = D(339) * TTJFC
      TO BE USED IN LIEU OF CTT IF INPUT MACH NO = 0.0
      YINT = YAW INERTIA OF HORIZONTAL TAIL ABOUT C.G. LB. IN SQ.
      QD = IN. PER SEC PER SEC = 386.0886
      CAVW = AVERAGE CHORD OF VERTICAL TAIL

      VALUES RUN FROM ROOT TO TIP WITH POINTS ON ELASTIC AXIS DIMENSIONAL.
      DX = INCREMENT OF DISTANCE ALONG ELASTIC AXIS
      TBD = TORQUE BOX DEPTH
      TBM = TORQUE BOX WIDTH
      SOA = S/A = TORQUE BOX PERIMETER OVER CROSS SEC. AREA

      ***YST(1-11) STORED ROOT/ACTUAL STRUCTURAL STATIONS***
      *ORIGIN AT C/L OF A/V*
      TBM AND TBD ARE STORED ROOT-TIP

      CALC GJTT TIP-ROOT AND STORE ROOT-TIP

```

```

graph TD
    Start([31.03 ---]) --> Read[READ T TAIL DATA FROM RCD 37]
    Read --> Box01[150 01  
READYS  
(1,0,0AT(1),  
100,37)]
    Box01 --> Box02[02  
00 = 00FPS*D(12)  
ARVT = AR/D(2)  
CAVV =  
CB1*(0(1)) +  
TRP1/D(2)  
NP = PC]
    Box02 --> Calc[CALCULATE ESURE]
    Calc --> Box03[03  
TEMP =  
(C0SEA*C0S10 +  
SINEA*SIN10)  
*PI7 + PI4  
TEMP2 =  
VTK/ID(1) +  
PIB/ARVT1**2  
ESURE =  
TEMP2*TEMP*PI1.C]
    Box03 --> Setup[SET UP DELTA X AND  
S/A ARRAYS FROM YS,  
TBD AND TBM  
***S/A HAVE DEPTHS  
AND WIDTHS AT  
STAI(1,1), EXCEPT  
S/A(11)=FIM(11) AND  
D(11)***]
    Setup --> Box04[04  
DX(1) = B502 -  
YST(11)  
SOA(1) =  
(TBD(11) +  
TBM(11))*D(2)  
/(TBD(11)+TBM(11)]
    Box04 --> Note[NOTE 05  
BEGIN DO LOOP  
100 I = 2, 11]
    Note --> Box06[06  
J = ND(12) - 1  
DX(1) = YST(J) +  
1 - YST(J)  
DAVE = (TBD(J) +  
1) * TBD(J)/D(2)]
    Box06 --> Box07[07  
MAVE = (TBM(J) +  
1) * TBM(J)/D(2)  
SOA(1) =  
D(2)/(DAVE +  
MAVE)/(DAVE+MAVE)]
    Box07 --> Box08{100 08  
END OF DO  
LOOP?}
    Box08 -- NO --> Box04
    Box08 -- YES --> SetupS[A]
    SetupS[***SETUP S/A VALUE  
BETWEEN ROOT TIE AND  
YST(1), IF ANY***] --> Box09[09  
TEMP2 = DC(3)  
11  
B502/C0SEA -  
YST(11)  
10/1  
1-1  
110  
DAVE = (TBD(1) +  
DB1)/D(2)  
MAVE = (TBM(1) +  
CB1*RSF5)/D(2)  
TEMP2 =  
D(2)/(DAVE +  
MAVE)/(DAVE+MAVE)  
***TEST FOR CTT  
CALC. CALC IF INPUT  
MACH NO NOT ZERO***  
***IF MACH NO = 0.0,  
THEN CTT IS EQUAL TO  
T-TAIL J FACTOR***  
118  
CTT = D(1)  
13  
14  
MACH  
1-1/01  
1-1  
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CHART TITLE - SUBROUTINE GUTT

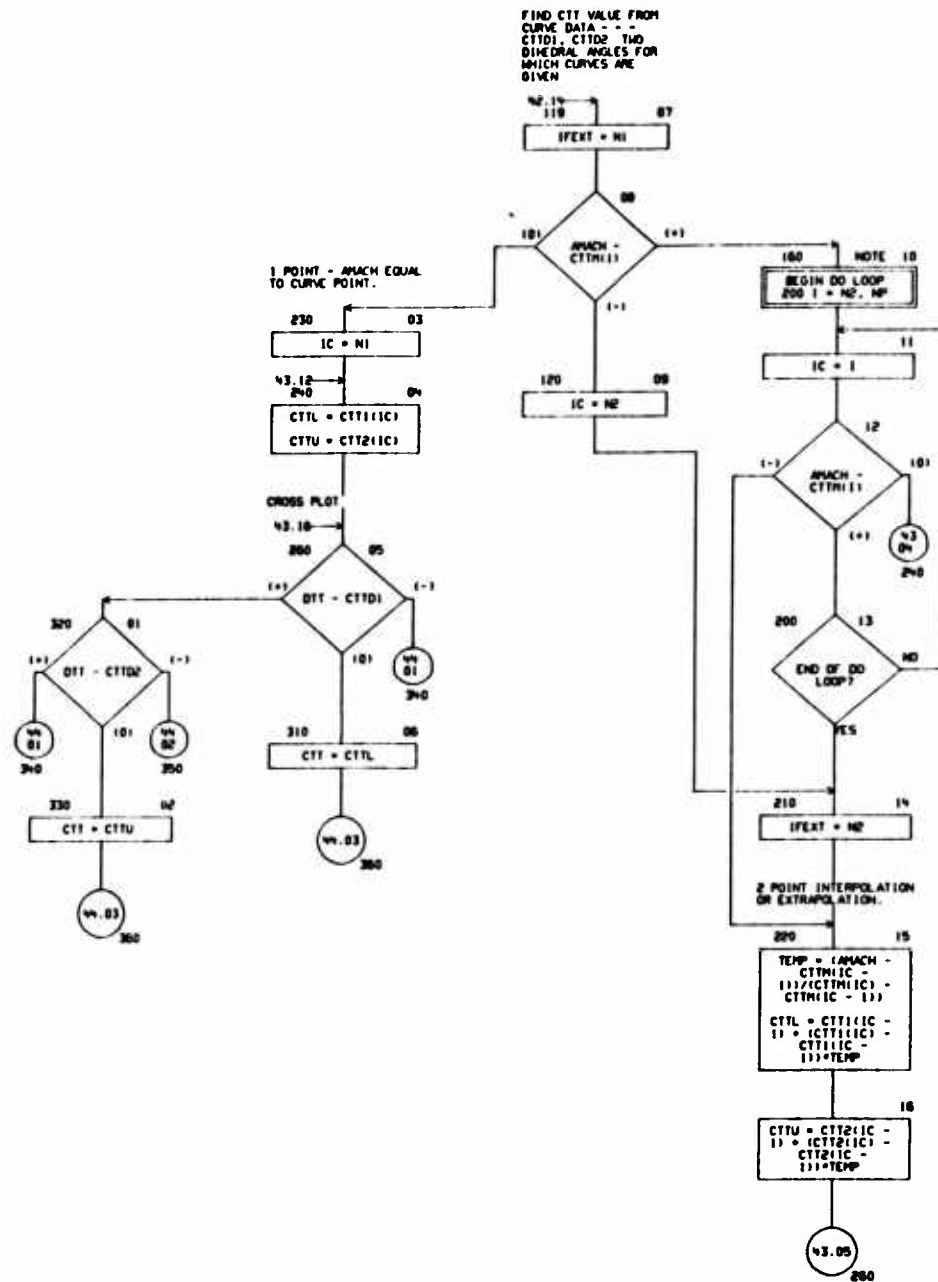


CHART TITLE - SUBROUTINE GJ11

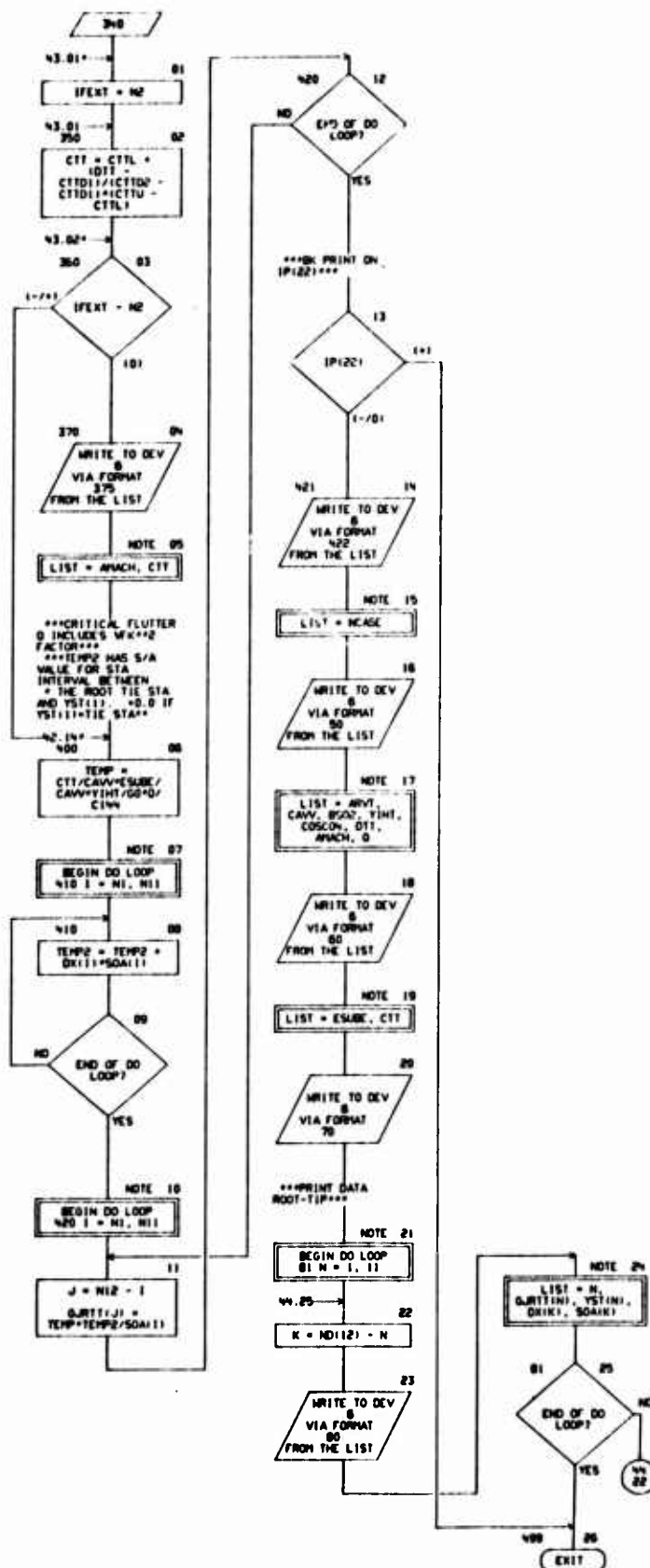


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON TCOM(6220)
COMMON /IPRINT/ IP(80)
DIMENSION T(2060), D(2060), CD(2000), ND(100), DC(100)
,TSEC(300), GJDAT(100), GJT(40), TGJ(200)
, YST(11), TBN(11), TBO(11), GJRTT(11)
, SOA(11), DX(11), CTT(20), CTT2(20), CTTM(20)
EQUIVALENCE (T(1),TCOM(1)), (D(1),TCOM(2061)), (CD(1),TCOM(4121))
, (ND(1),TCOM(6121)), (DC(1),D(1401))
, (N1,ND(1)), (N2,ND(2)), (N10,ND(10)), (N11,ND(11)), (N12,ND(12))
, (GJDAT(1),T(1661)), (GJT(1),T(1621))
, (TGJ(1),T(1761))
EQUIVALENCE (TSEC(1),CD(1501)), (GJRTT(1),T(668))
, (CTTM(1),GJDAT(21)), (CTT(1),GJDAT(41)), (CTT2(1),GJDAT(61))
, (D0,DC(33)), (PT0,DC(35)), (PT4,DC(76)), (PT7,DC(137))
, (COS10,DC(138)), (SIN10,DC(139)), (COSPS,DC(143))
, (VTK,DC(144))
, (PC,GJDAT(18)), (CTD1,GJDAT(19)), (CTD2,GJDAT(20))
, (COSEA,TGJ(20)), (SINEA,TGJ(19))
, (SINCOS,TGJ(25)), (COSCON,TGJ(26))
, (AR,TGJ(21)), (BS02,TGJ(8)), (YST(1),TGJ(78)), (C144,D(17))
, (TBO(1),TGJ(49)), (TBN(1),TGJ(38))
, (CB1,TGJ(12)), (TRP,TGJ(14)), (BS102,TGJ(11))
, (DB1,TGJ(13)), (RSFS,TGJ(18))
EQUIVALENCE (AMACH,D(336)), (D,D(337)), (TWFO), (TINT,D(360))
, (DTT,D(310)), (WDH4), (TTJFC,D(339))
EQUIVALENCE (G0,GJT(26)), (CAVV,GJT(27)), (ARVT,GJT(28))
, (ESUBE,GJT(29)), (TEMP,GJT(30)), (TEMP2,GJT(31))
, (DR(1),GJT(1)), (SOA(1),GJT(12)), (CTT,GJT(23)), (CTTL,GJT(24))
, (CTTU,GJT(25))
, (VT10,D(289))
, (INCASE,ND(160)), (MPAGE,ND(185))
375  FORMAT( B0H0***** EXTRAPOLATED ON T-TAIL STIFFNESS COEFF. FOR M
ACH NO., IF6.2, BH, CTT = , IE9.3 )
422  FORMAT (10H1 CASE14,17H---GJT1 SUBR---,60X,
10H** GJT1 - IP(22) **)
50  FORMAT (6X, 47-TAIL GJn // 6X, 4AR=,IF5.1, 6X, 4C-AV=,IF7.2,
10X, 4EA LENGTH=, IF7.2, 6X, 4YAW INERT. M-TAIL =, IE12.5 /
42X, 4COS SHEEP C/4 =, IF7.5, 4X, 4DIEDRAL OF M-TAIL =, IF6.2/
6X, 4MACH=, IF6.2, 4X, 4Q=, IF7.2 )
60  FORMAT ( 1H0, 6X, 4ESUBE =, IF9.4, 10X, 4CTT =, IE12.5 ///)
70  FORMAT (8H0 STA, 6X, 2H0J, 14X, 2HYS, 14X, 2H0Y, 14X, 2H5/A)
80  FORMAT (1H0, 3X, 12,F16.1,F14.3,2X,F13.3,3X,F13.4)

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08/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 46

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE CMSG*****

STRUCTURAL SYNTHESIS CONSTANTS AND DATA SETUP

CHART TITLE - SUBROUTINE CNSTC

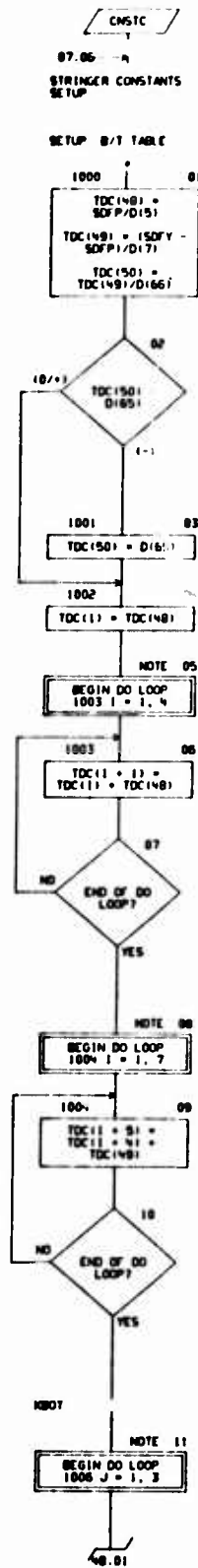


CHART TITLE - SUBROUTINE CNSTC

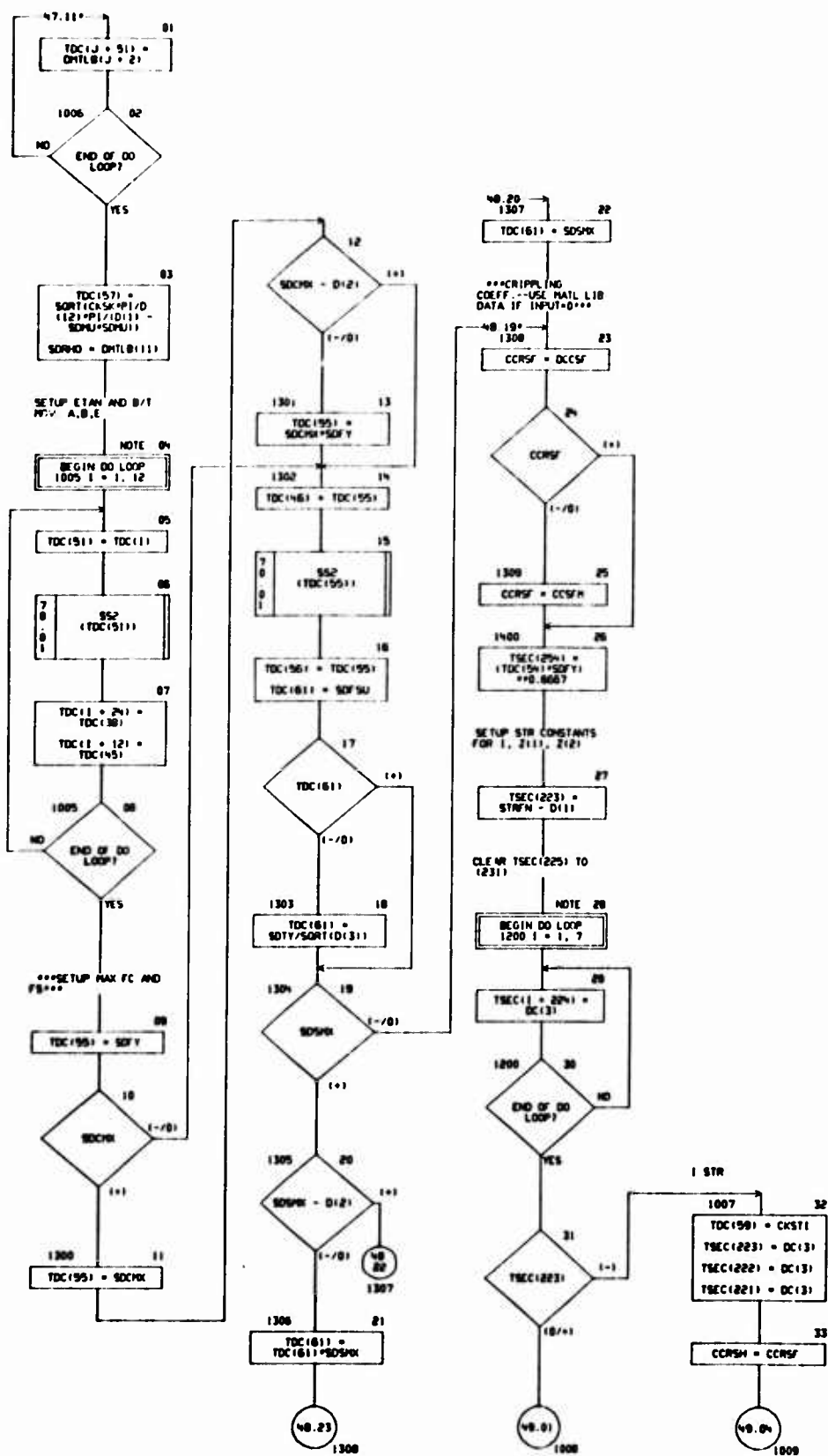


CHART TITLE - SUBROUTINE CWSYC

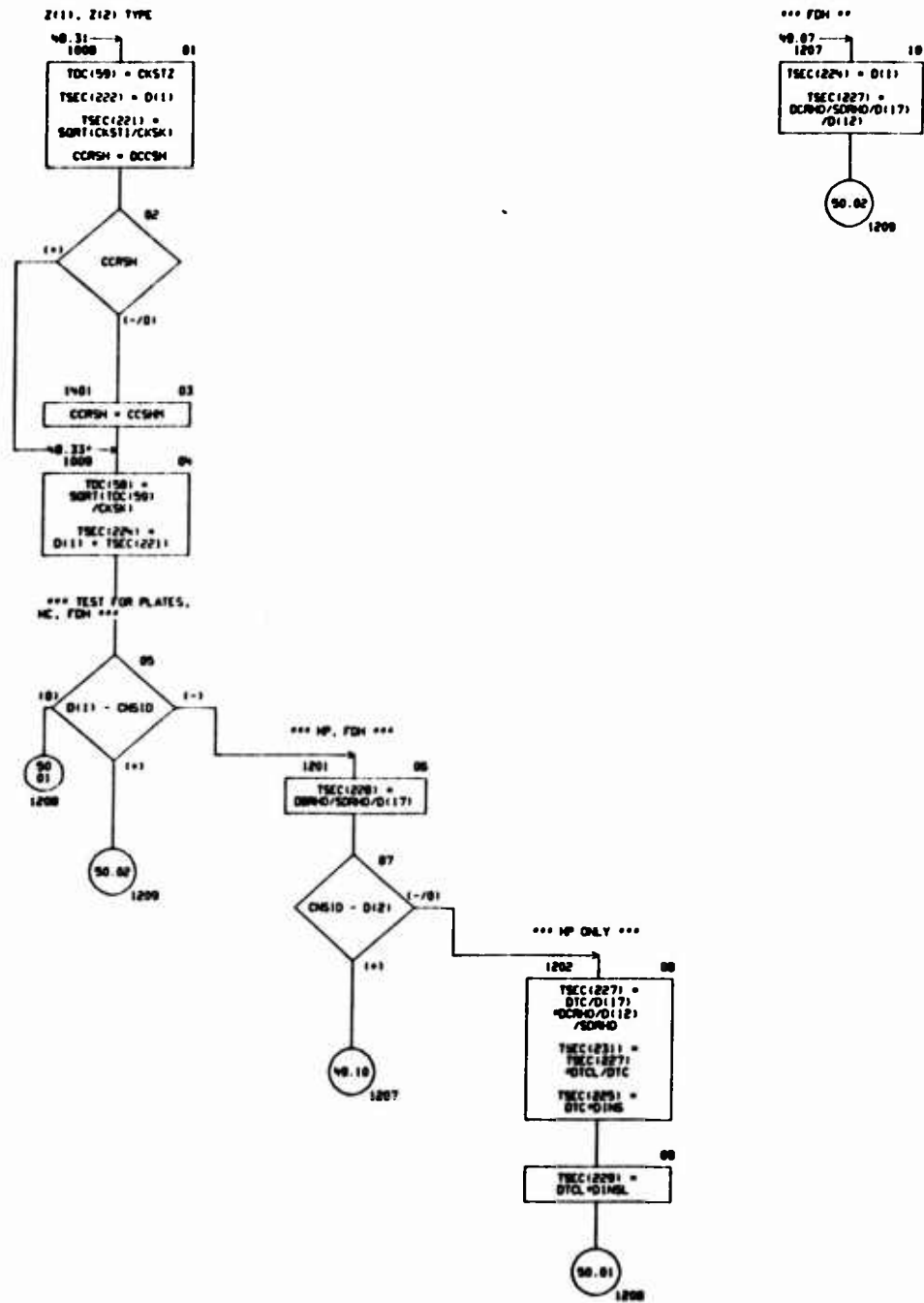


CHART TITLE - SUBROUTINE CNSTC

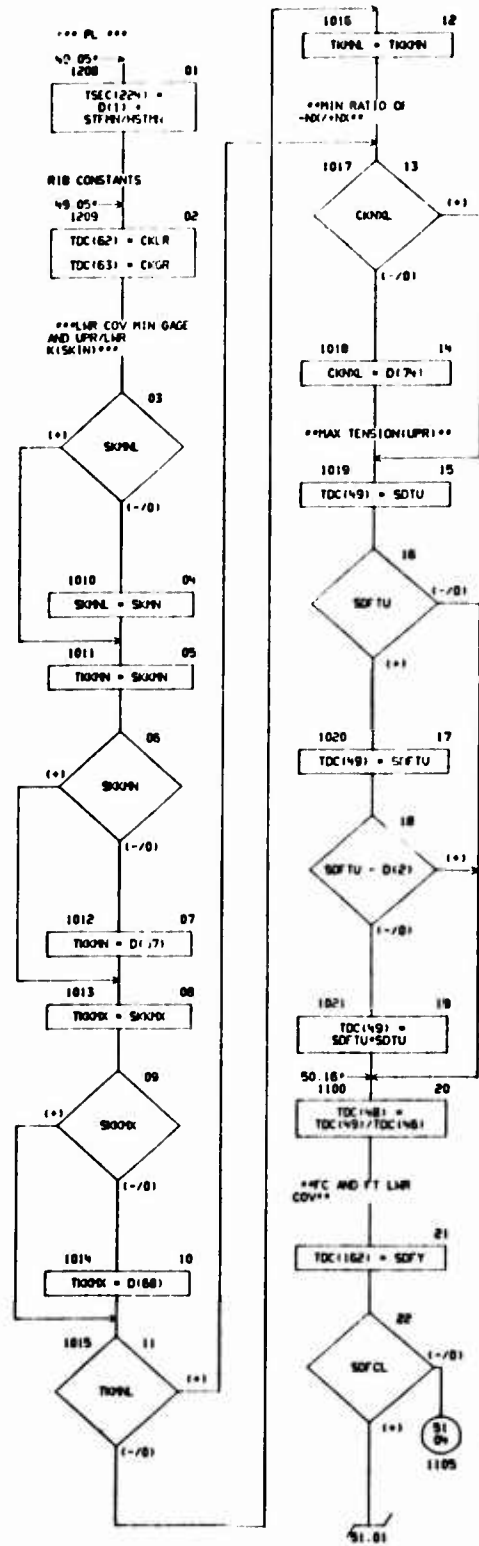


CHART TITLE - SUBROUTINE CNSTC

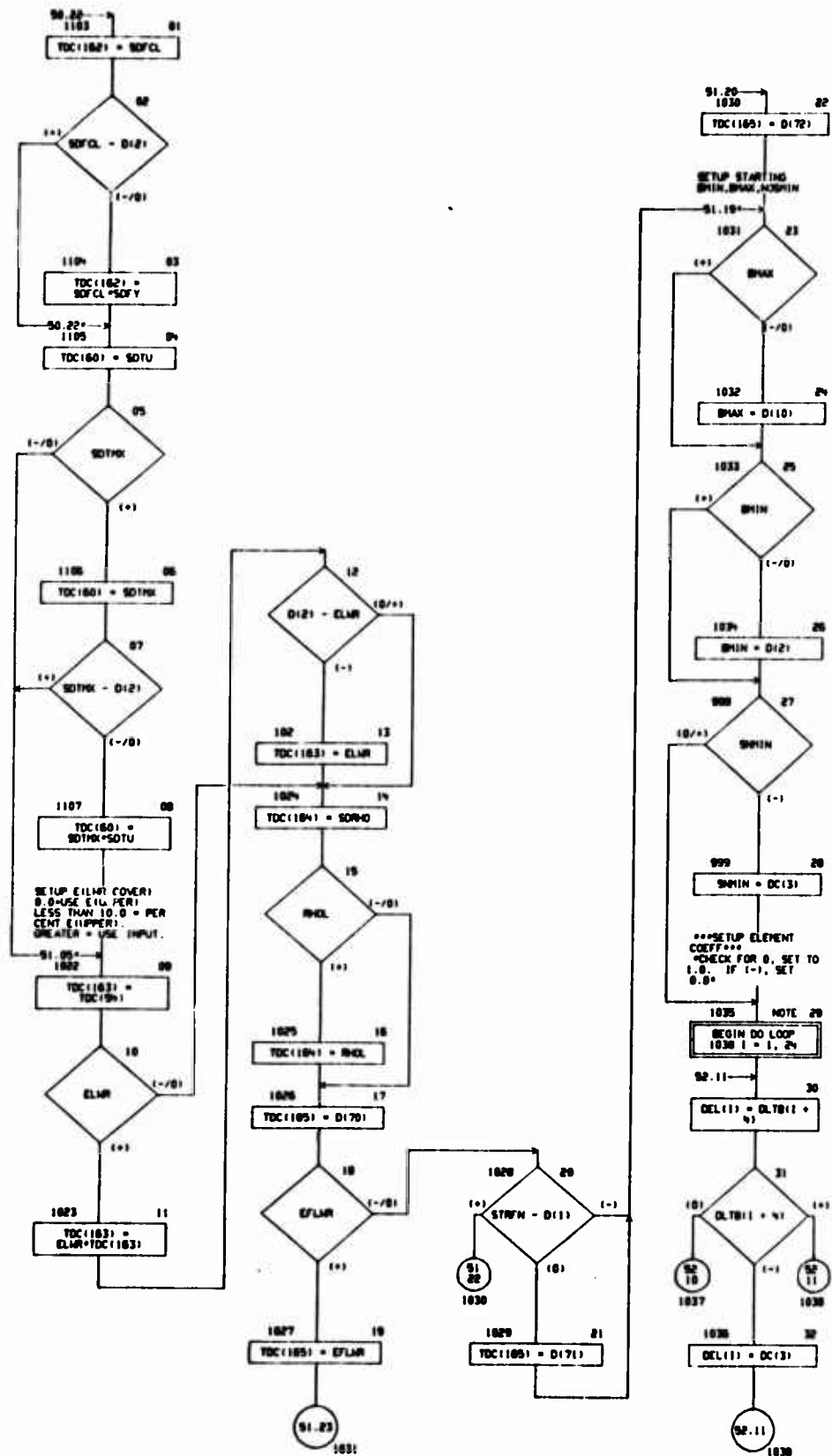


CHART TITLE - SUBROUTINE CNSTC

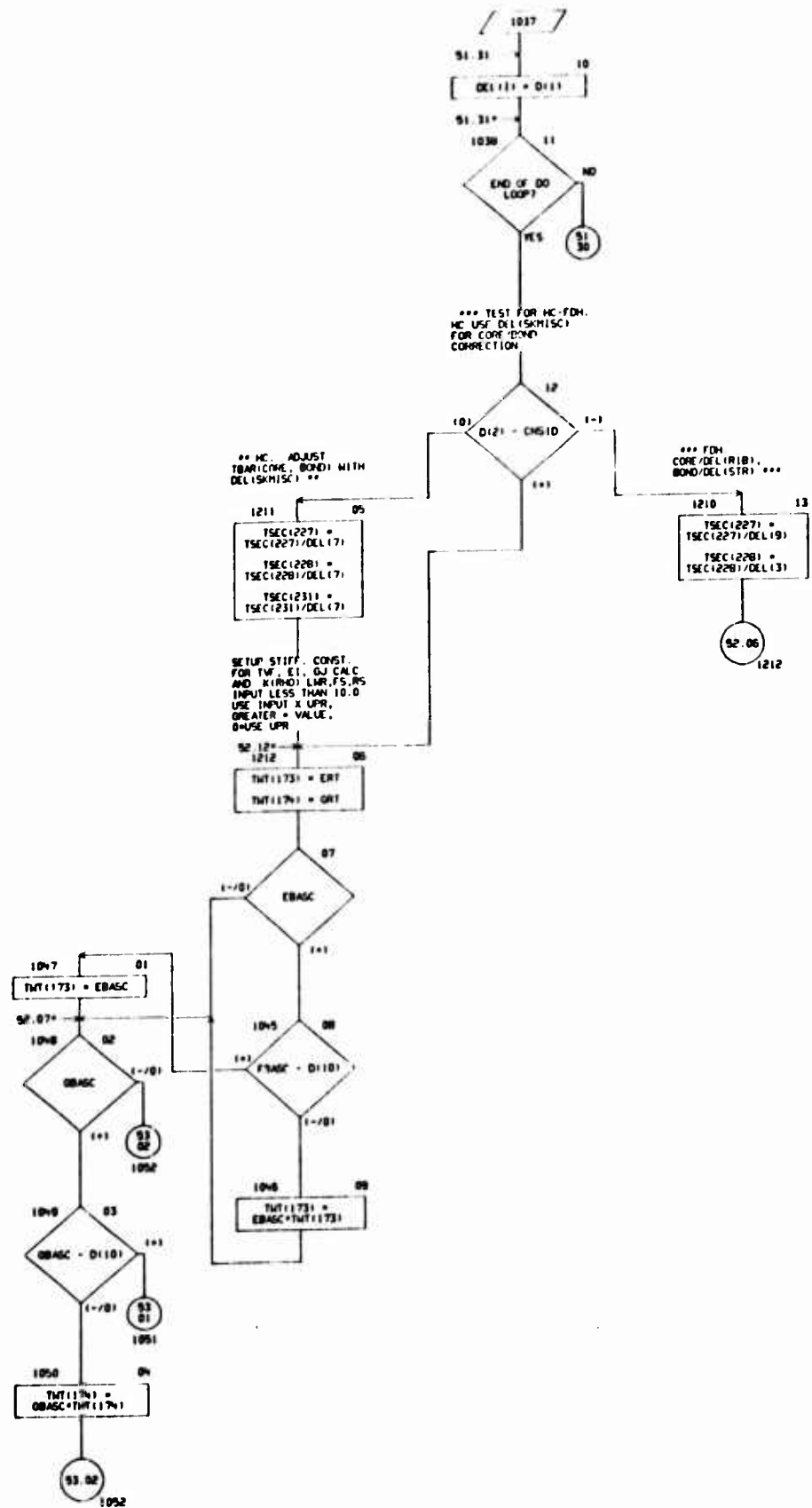


CHART TITLE - SUBROUTINE CNSTC

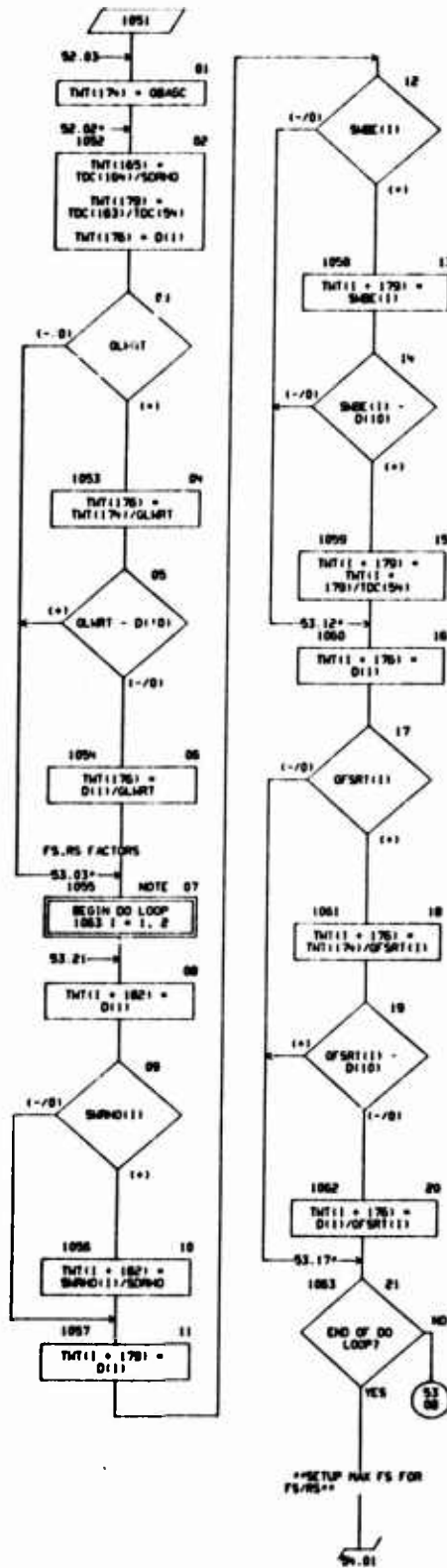


CHART TITLE - SUBROUTINE CMSTC

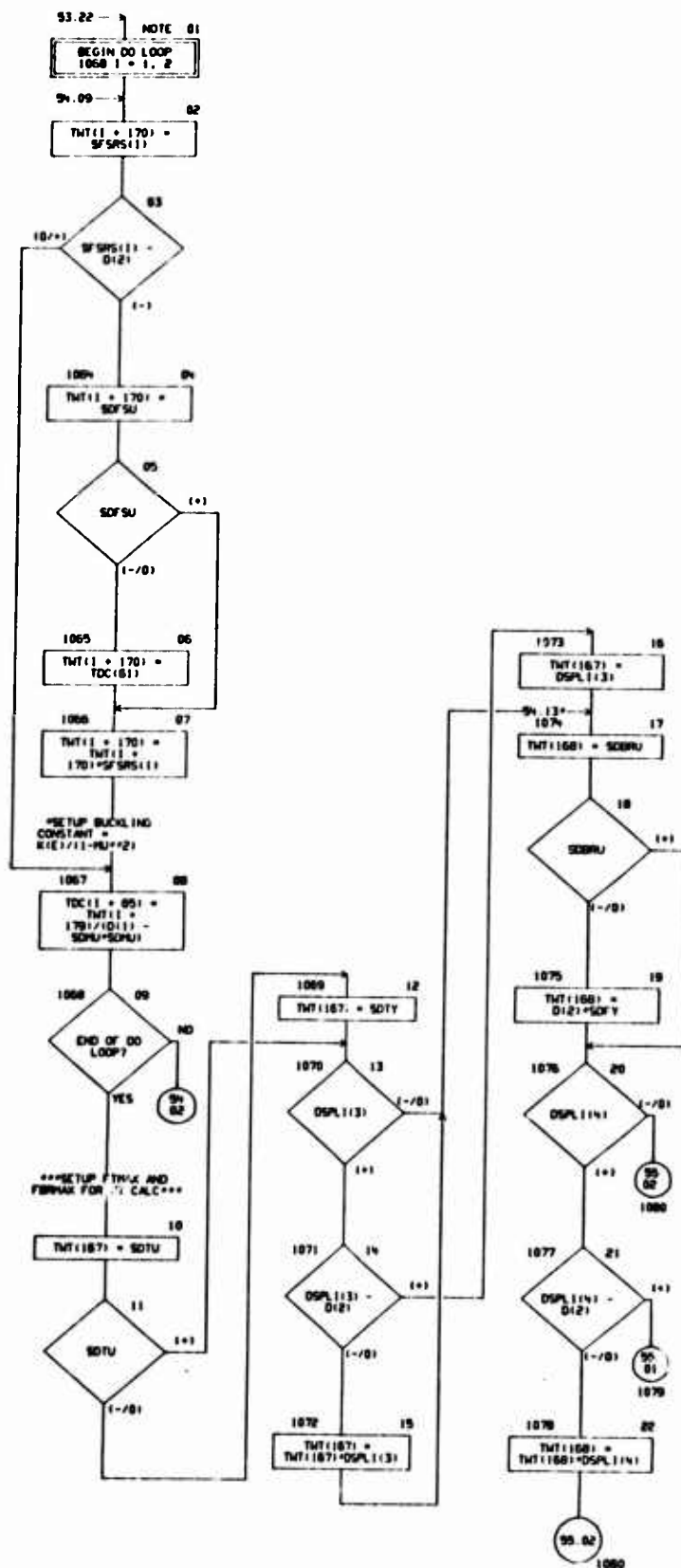


CHART TITLE - SUBROUTINE CMSTC

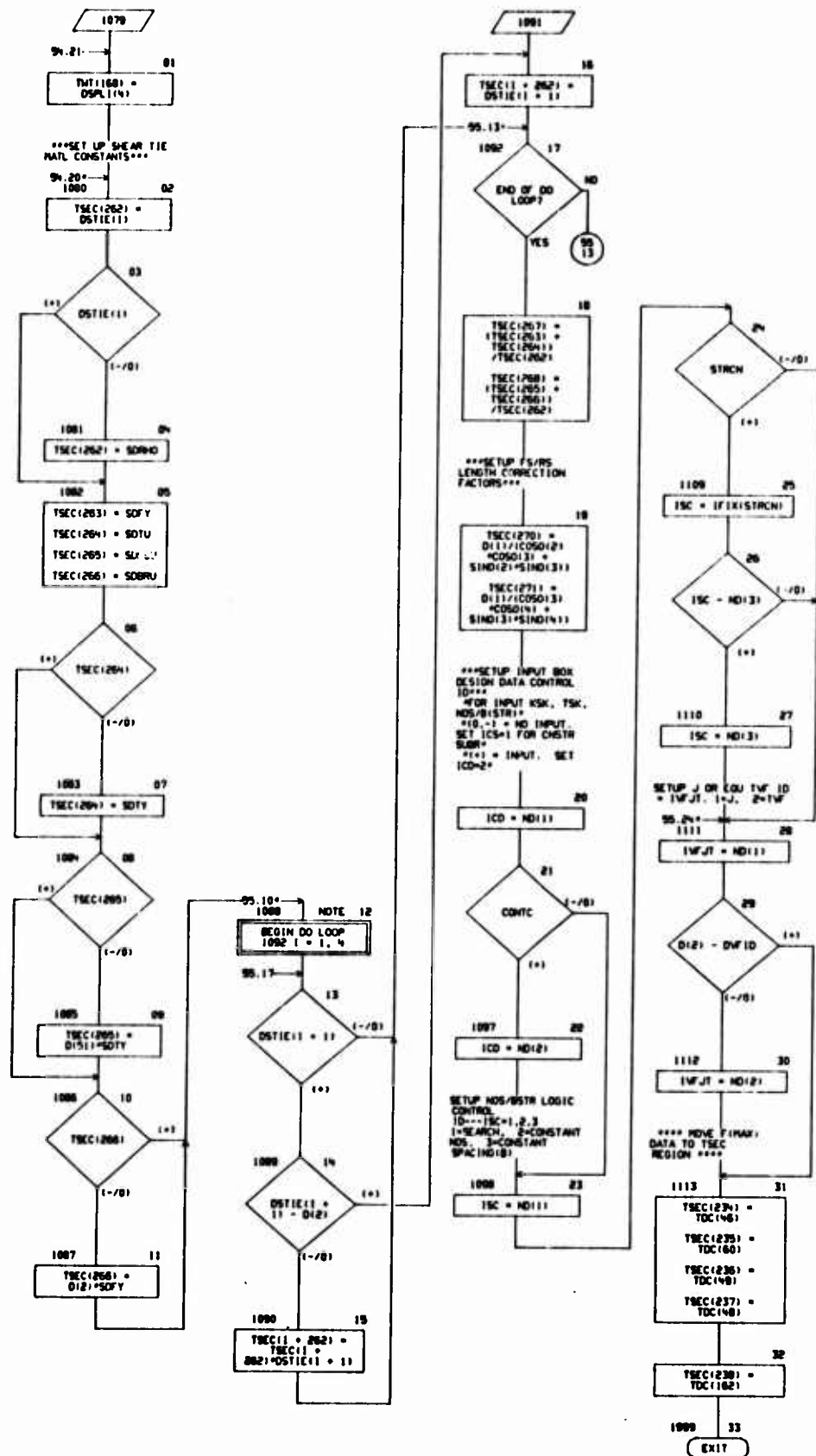


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(2060),D(2060),CD(2000),ND(100)
DIMENSION DC(100), DMTLB(17),
TDC(200),TSC(1420),TSS(100),TWT(400),TSEC(300),
WFSAS(2),SWRND(2),SABC(2),
WFSRT(2),
DSTIE(0),OSPL(10),
COSO(6),SIND(6),
DLTB(30),DEL(30)
EQUIVALENCE (TDC(1),T(134)),(TSC(1),T(154)),(TSS(1),T(196)),
(DC(1),D(140)),(TWT(1),CD(110)),(TSEC(1),CD(150)),
(DLTB(1),D(600)),(DEL(1),TWT(25)),
(DMTLB(1),T(20)),(WFSAS(1),D(412)),(SWRND(1),D(414)),
(SABC(1),D(416)),(WFSRT(1),D(453)),
(ITOPN,TDC(84)),(ITOPX,TDC(85)),
(IP1,D(15)),(UPNZ,D(205)),(UPNZ,D(206)),
(CCRSH,TSEC(252)),(CCRSF,TSEC(253)),
(ICD,ND(49)),(ISC,ND(22)),
(IWFJT,ND(53)),(I,J,ND(31)),(J,ND(30))
EQUIVALENCE (STRFN,D(361)),(CKSK,D(362)),(CKSTI,D(363)),
(CKSTZ,D(364)),(SKOPN,D(365)),(SKOPX,D(366)),(CONTC,D(367)),
(DWFO,D(368)),(SKOPN,D(370)),(DTHN,D(371)),(BMIN,D(380)),
(BMAX,D(381)),(SMIN,D(382)),(TRCN,D(383)),(STFHN,D(384)),
(SOCHK,D(385)),(SDTHK,D(386)),(SOSHK,D(387)),(SOFCL,D(388)),
(ELMR,D(389)),(RNDL,D(390)),(EFLMR,D(391)),(CHNDL,D(392)),
(SOPHL,D(394)),(THOHL,D(395)),(SOFU,D(398)),
(CCLR,D(401)),(CKGR,D(402)),(SOBRU,DMTLB(17)),
(EBASC,D(450)),(OBASC,D(451)),
(OLMRT,D(452)),(DCCSH,D(408)),(DCCSF,D(409))
EQUIVALENCE (CHSID,D(451)),(DTC,D(462)),(DCRHO,D(463)),
(DBRHO,D(464)),(DINS,D(465)),(DTCL,D(466)),(DINSL,D(467)),
(DSTIE(1),D(52)),(OSPL(1),D(1490)),
(COSO(1),T(146)),(SIND(1),T(140)),
(CCRSH,T(199)),(CCRSF,T(200)),
(SOPHO,TWT(175)),
(SOPU,DMTLB(2)),(SOFPP,DMTLB(13)),
(SOFY,DMTLB(6)),(SDTY,DMTLB(10)),(SDTU,DMTLB(12)),
(IERT,DMTLB(14)),(IRT,DMTLB(15)),(SOFSU,DMTLB(16))

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06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 57

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE ABCD*****

INITIAL STRUCTURE AND CONTENT INERTIA LOAD SETUP

ABCM

••SETUP DM FACTORS
AT DDMO••



40 CELL 1. USE
CELL 2*

50 12 115 01
TT(2) = TFLD(1) -
DLFL(1)/D(2)

52
TT(2)

10/++
116 03
TT(2) = DC(3)

50 02+ 117 04
RFDGM(1) = 41 -
TT(2)
TFLD(1)/TFLD(5)

50 22 130

41 CELL 1 AT ZERO
FUEL. TEST CELL 2*

50 10 122 05
TT(2) = TT(1)
TT(1) = DC(3)

57
TFLD(1) = 41

11/0
123 06
TFLD(1)

11/0
124 09
TT(2) = TT(2) +
TFLD(1)

10/++
125 11
TT(2) = DC(3)

50 10+ 126 12
RFDGM(1) = 41 -
TT(2)
TFLD(1)/TFLD(5)

50 22 130

42 CELL 1 ONLY*

50 16+ 121 05
RFDGM(1) =
TT(1) +
TFLD(1)/TFLD(5)

50 22 130

43 SEQUENCE 2.1.
CHECK CELL 2*

50 13 127 13
TFLD(1) = 41

11/0
128 14
TFLD(1)

11/0
129 15
TT(2) = TFLD(1) -
DLFL(1)/D(2)

10/++
130 17
TT(1) = TT(2)
TT(2) = DC(3)

11/0
131 18
TFLD(1)

11/0
132 20
TT(1) = TT(1) +
TFLD(1)

10/++
133 21
TT(1) = DC(3)

44 130
50 00+
END OF DO
LOOP?

YES
50 07

NO
50 07

45 SETUP FOR DGM(1)
LOADS CALC FOR TSET
SUBR**

140 23
RFL1 = RFDGM(1)
RFL2 = RFDGM(5)
COLK1 = D(1) -
DCDL(1)
COLK2 = D(1) -
DCDL(5)

141 24
COLK3 = D(1)
DGM(1) = D(1)

NOTE 25
BEGIN DO LOOP
41 1 = 1, 11

50 01 26
TSS(1) =
RFL1*FLV(1) +
RFL2*FLV(2)
TSS(1) = 11 +
RFL1*FLV(1) +
RFL2*FLV(2)

27
TSS(1 + 22) =
RFL1*FLV(1) +
RFL2*FLV(2)
TSS(1 + 33) =
COLK1*COLV(1) +
COLK2*COLV(2) +
COLK3*COLV(3)

28
TSS(1 + 44) =
COLK1*COLV(1) +
COLK2*COLV(2) +
COLK3*COLV(3)

29
TSS(1 + 55) =
COLK1*COLV(1) +
COLK2*COLV(2) +
COLK3*COLV(3)
SDMV(1) =
TSS(1) + TSS(1 +
33) + STMV(1)

30
SDMV(1) = TSS(1) +
TSS(1 + 44) + STMV(1)
SDMT(1) = TSS(1) +
TSS(1 + 55) + STMV(1)

31
TSS(1 + 66) =
DGM(1) + SDMV(1)
TSS(1 + 77) =
DGM(1) + SDMT(1)
TSS(1 + 88) =
DMT(1) + SDMT(1)

50 01

CHART TITLE - SUBROUTINE AB04

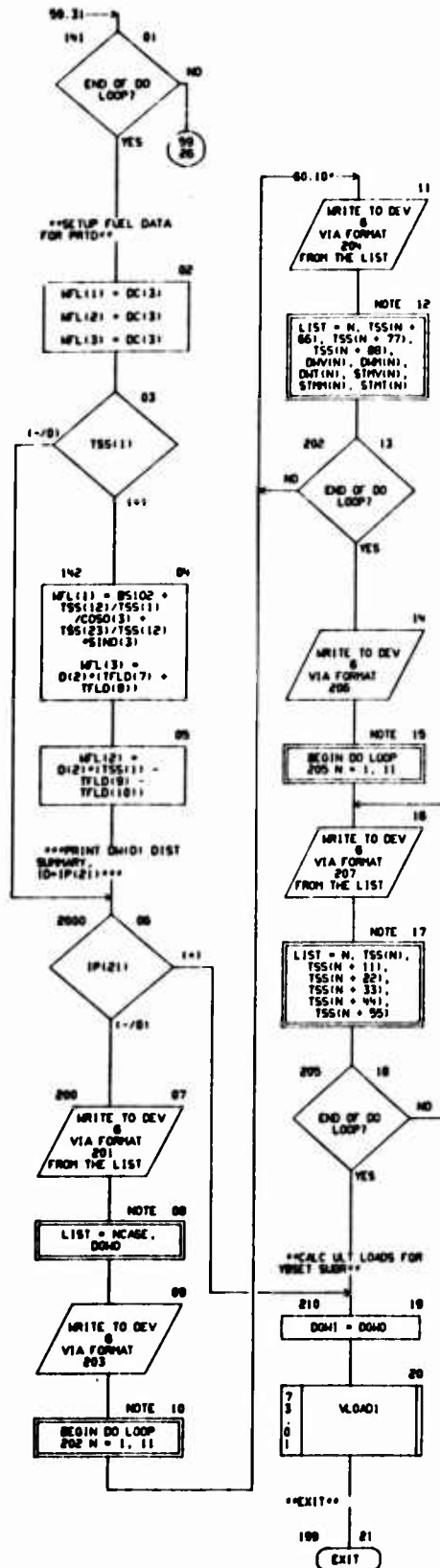


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T(6220)
COMMON /IPRINT/ IP(80)
DIMENSION D(2060),CD(2000),ND(100),DC(100),
TSEC(300),TT(24),
TDOM(16),
SDMV(11),SDMH(11),SDMT(11),STHV(11),STPH(11),STHT(11),
COLV(11),COLM(11),COLT(11),COLVE(11),COLME(11),COLT2(11),
COLVS(11),COLMS(11),COLT3(11),FLV(11),FLVE(11),FLM(11),FLME(11),
FLT(11),FLT2(11),DLFL(4),DFLD(4),DCOL(10),TFLD(10),TFDOM(8),
DMT(11),TSS(100),MFL(3),SIND(6),COSO(6),
YSTRC(11),DMV(11),DMH(11)
EQUIVALENCE (D(1),T(2081)),(D(11),T(4121)),(ND(1),T(6121)),(DC(1),
D(1401)),(TSEC(1),CD(1901)),(TT(1),T(13171)),(TDOM(1),T(4301)),
(VT(1),D(2091)),(DM(1),D(1101)),(DGMD,D(1051)),
(DCOL(1),D(1671)),(YSTRC(1),TSEC(1661)),(MFL(1),T(971)),
(BS102,T(151)),(SIND(1),T(1401)),(COSO(1),T(1461)),
(DDM1,T(221)),(DGMD,D(1051)),
(TFLD(1),T(6311)),(TFDOM(1),T(5221)),
(DMV(1),T(5001)),(DMH(1),T(6091)),
(DDM1,TDOM(21)),(DDMK,TDOM(31)),
(INCASE,ND(601)),(INPADE,ND(851)),(FL(1),ND(541)),(N,ND(311)),(1,ND(301))
EQUIVALENCE (COLV(1),T(3091)),(COLM(1),T(3291)),(COLT(1),T(3311)),
(COLVE(1),T(3421)),(COLME(1),T(3531)),(COLT2(1),T(3641)),
(COLVS(1),T(3751)),(COLMS(1),T(3861)),(COLT3(1),T(3971)),
(FLV(1),T(4451)),(FLM(1),T(4561)),(FLT(1),T(4671)),
(FLVE(1),T(4781)),(FLME(1),T(4891)),(FLT2(1),T(49191)),
(SDMV(1),T(8441)),(SDMH(1),T(8551)),(SDMT(1),T(8661)),
(TBWK,TDOM(41)),(DLFL(1),D(1941)),(DFLD(1),D(1991)),(TSS(1),T(19811)),
(TBWK,TDOM(41)),(MFL1,TDOM(111)),(MFL2,TDOM(121)),(COLK1,TDOM(131)),
(COLK2,TDOM(141)),(COLK3,TDOM(151)),(DMT(1),T(6201)),
(STHV(1),T(8111)),(STPH(1),T(8221)),(STHT(1),T(8331))
201 FORMAT (10H) CASE 14,10X,94H---INITIAL DEADWEIGHT DISTRIBUTION
DATA AT DOM(10)---,13X,18H** ABDM - IP(21) **//5X,SHOARD*,F(9,1)
203 FORMAT (10H) *****TOTAL 1-G DEADWEIGHT***** **INITI
AL TORQUE-BOX** **LE,TE,TIP,MISC CONTENTS** //10H STA
SHEAR B. MOM. T. MOM. SHEAR B. MOM. T. MOM.
SHEAR B. MOM. T. MOM. )
204 FORMAT (14 3X,12,F10.1,F12.1,2F11.1,F12.1,2F11.1,F12.1,F11.1)
206 FORMAT (7H) **DESIGN FUEL 1-G D.MT.** **DESIGN
CONC. 1-G D.MT.** //7H STA SHEAR B. MOM. T. MOM.
SHEAR B. MOM. T. MOM. )
207 FORMAT (14 3X,12,F10.1,F12.1,2F11.1,F12.1,F11.1)

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05/18/74

AUTOFLOW CHART SET - SHEEP HING AND EMPENNAGE MODULE - PAGE 62

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE VDSCT*****

EFFECTIVE BOX DEPTH INITIALIZATION

CHART TITLE - SUBROUTINE YBSET

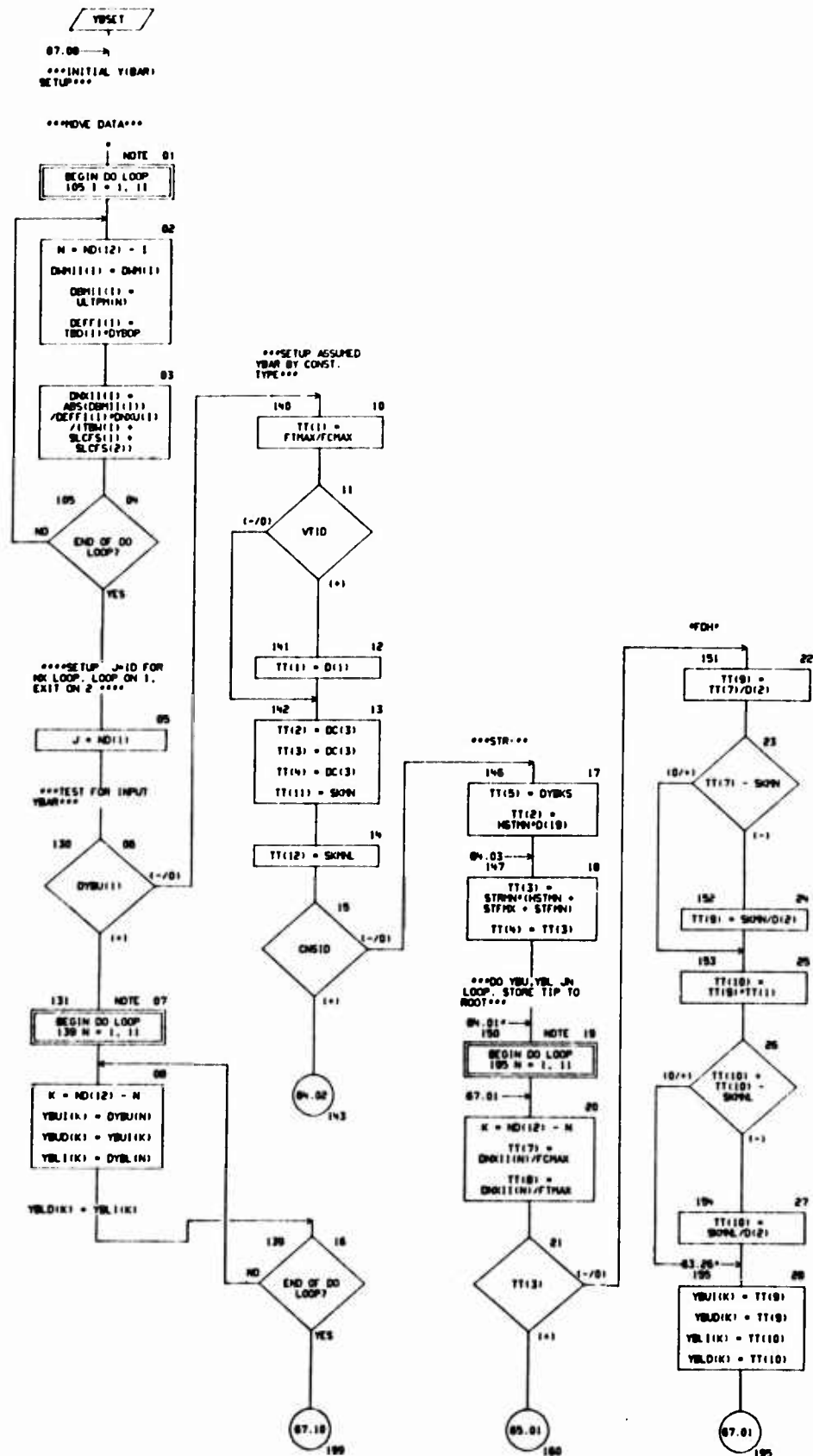
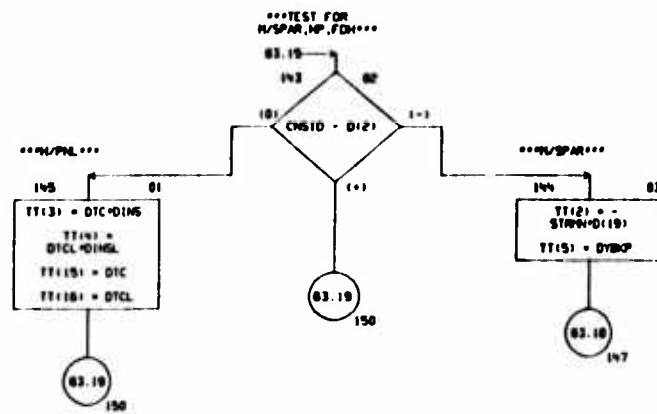


CHART TITLE - SUBROUTINE YBSET



...STR. N/S. NP.
CALC B...



CHART TITLE - SUBROUTINE YBSET

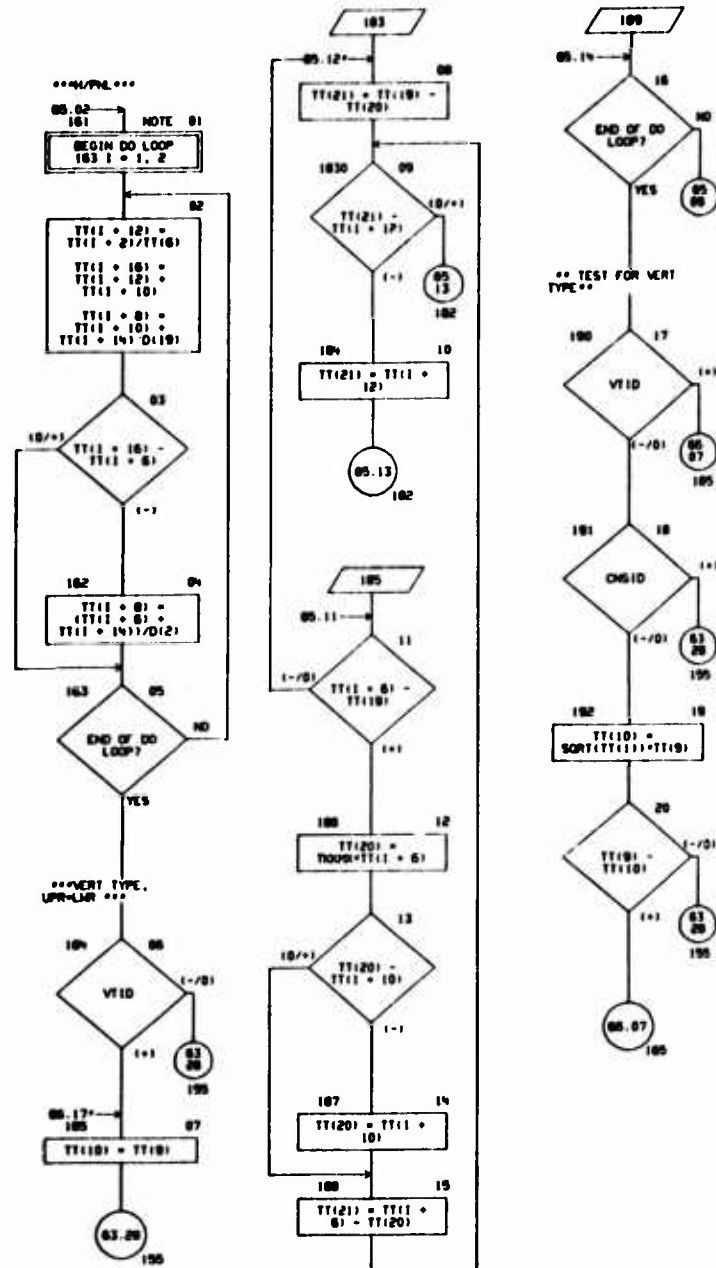


CHART TITLE - SUBROUTINE YBSET

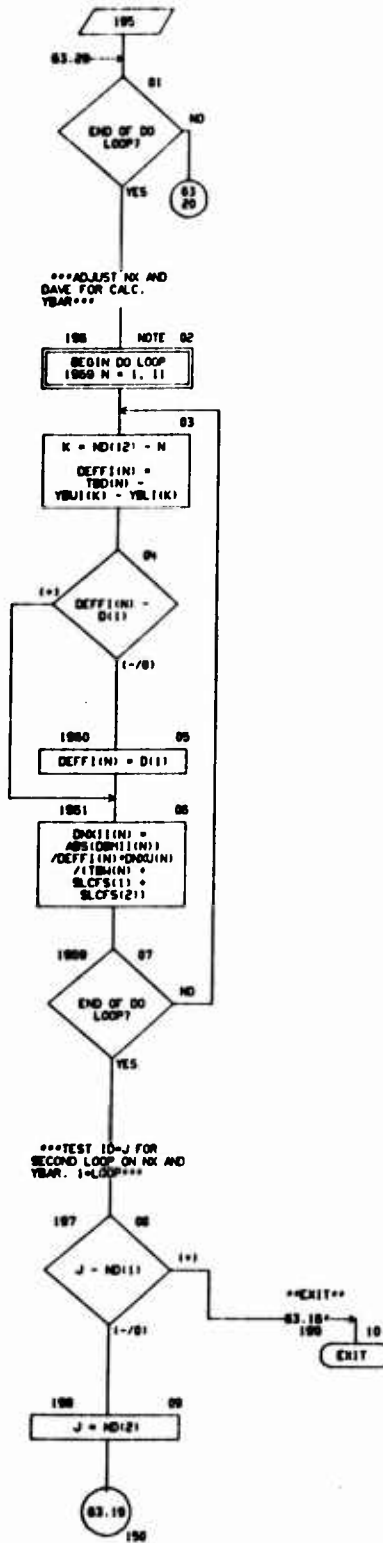


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T(6220)
DIMENSION D(2060),CD(2000),ND(100),
DC(100),TSEC(300),TT(24),
DYBU(11),DYBL(11),
TDC(200),TBM(11),TBD(11),DNV(11),DAM(11),ULTPM(11),
DMH(111),DBH(111),DNK(111),DEFF(111),
SLCTS(5),DNOU(11),
YBU(11),YBL(11),YBUD(11),YBLD(11)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TSEC(1),CD(1501)),(TT(1),T(1317)),
(NSHM,D(377)),(DYBU(1),D(997)),(DYBL(1),D(1041)),
(TDC(1),T(1341)),(TBM(1),T(942)),(TBD(1),T(530)),
(DNV(1),T(500)),(DAM(1),T(609)),(ULTPM(1),TSEC(1)),
(DNOU(1),D(931)),
(YBUD(1),T(679)),(YBLD(1),T(690)),
(YBU(1),TSEC(133)),(YBL(1),TSEC(180))
EQUIVALENCE (NSID,D(481)),(SKON,D(370)),(STPM,D(371)),
(STPM,D(379)),(SNMIN,D(382)),(STPM,D(394)),(SKBL,D(394)),
(OTC,D(462)),(OTCL,D(466)),(DINS,D(4C5)),(DINSL,D(467)),
(FCHAX,TDC(461)),(FTMAX,TDC(60)),(TKKOK,TDC(65)),(VTID,D(269)),
(DYBKS,D(115)),(DYBKP,D(116)),(DAM(1),T(701)),
(DNK(1),T(723)),(DBH(1),T(712)),(DEFF(1),T(800)),
(BMIN,D(380)),(BMAX,D(381)),(DYBOP,D(117)),(SLCTS(1),D(1470)),
(IN,ND(30)),(K,ND(29)),(I,ND(28)),(J,ND(27))

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06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 89

CHART TITLE - INTRODUCTORY COMMENTS

****SUBROUTINE 952****

STRESS-STRAIN CURVE EVALUATION AT GIVEN STRESS (FC)

CHART TITLE - SUBROUTINE SS2(SFC)

SS2

48.06 →

STRESS-STRAIN EVAL.
SUBR

REVISION -- 01-10-66
-- NEW FORMAT

STRAIN AND REDUCED
MODULUS FOR GIVEN FC

00 01
SFC = SFC1

02
SC1 =
EXP(SD(2)*SFC)

03
SC2 = D(1)/SD(3)

COMPUTE STRAIN, ET.
ES

04
SA(1) = SFC*SC2 +
SD(1)*SC1
SA(3) = SFC/SA(1)

05
SA(2) =
D(1)/SC2 +
SD(1)*SD(2)*SC1
SC1 = SA(2)/SA(3)

ENBK AND KDOT

06
SA(8) =
SA(3)*(D(1) +
D(2)*SORT(D(3) +
D(4)*SC1))
SA(9) =
SD(8)*SORT(SA(8)
/SFC)

ENL1 AND ENL2

07
SA(4) =
SORT(SA(2)*SD(3))
SA(5) = SA(3)

END1 AND END2

08
SA(6) = SA(2)

09
SA(7) =
SA(3)*(D(4) +
D(6)*SC1)

10
EXIT

CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON T(2060),D(2060),CD(2000),ND(100)

DIMENSION

TDC(200),TSC(1420),TSS(100),

SA(14),SD(7)

EQUIVALENCE (TDC(1),T(134)),(TSC(1),T(134)),(TSS(1),T(136)),

(SA(1),T(137)),(SD(1),T(138)),(SC,T(139)),(SC2,T(132)),

(SC1,T(132))

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE WLOAD*****

NET ULTIMATE DESIGN LOADS EVALUATION

CHART TITLE - SUBROUTINE VLOAD1

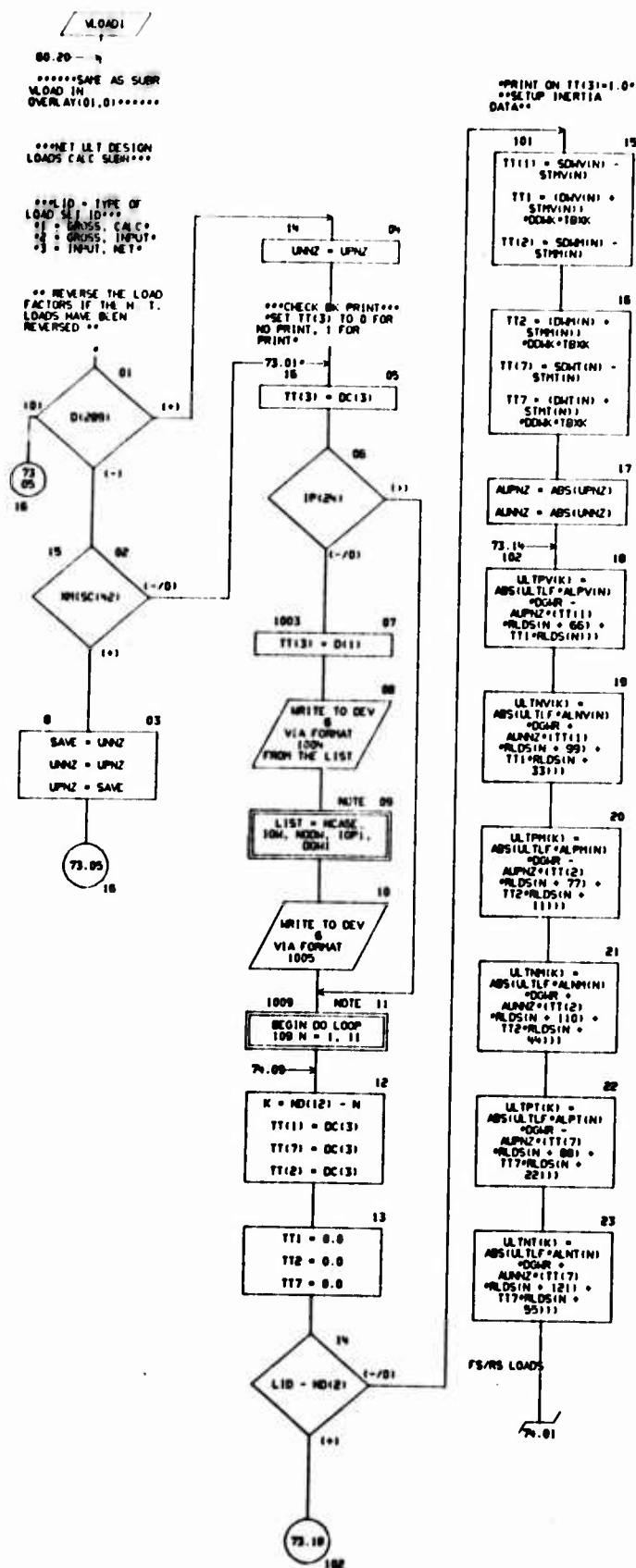


CHART TITLE - SUBROUTINE WLOAD1

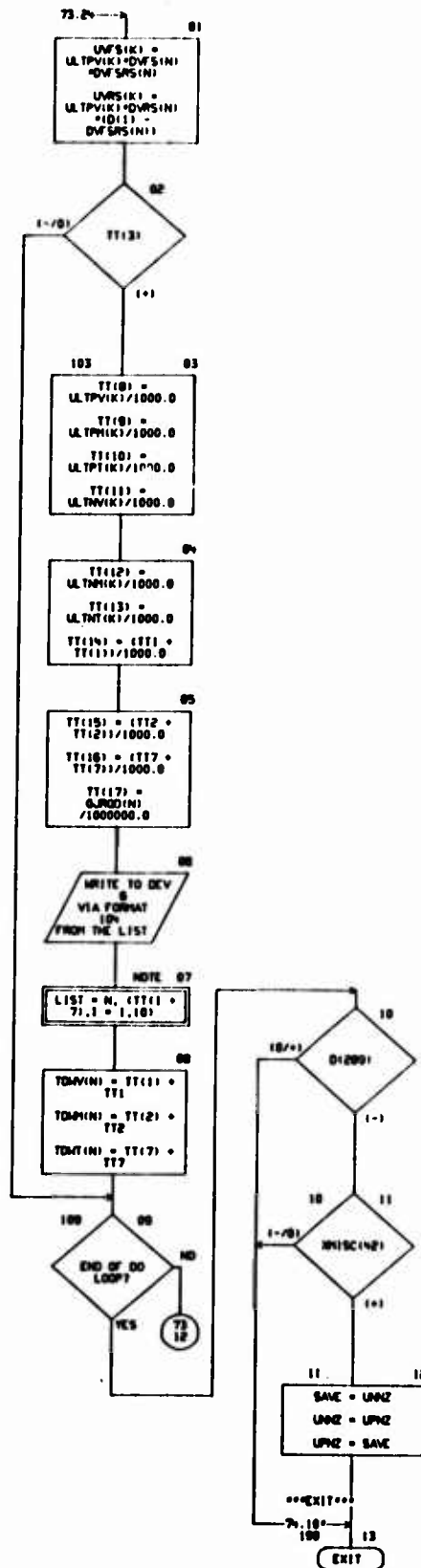


CHART TITLE - NON-PROCEDURAL STATEMENTS

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COMMON T(2060),D(2557),CD(2000),ND(100)
COMMON /PRINT/ IP(80)
COMMON /MISC/ NMISC(100)
DIMENSION DC(100),T(124),TSEC(300),
ALPV(11),ALPH(11),ALPT(11),ALNV(11),ALNM(11),ALNT(11),
TDGH(16),ULTPT(11),ULTNT(11),
DMV(11),DMH(11),DMT(11),SDMV(11),SDMH(11),SDMT(11),
UVFS(11),UVMS(11),DVFS(11),DVMS(11),
TDMV(11),TDMH(11),TDMT(11),
GJRDD(11),DVFSRS(11),
RLDS(132),
ULTPV(11),ULTPH(11),ULTNV(11),ULTNH(11)
EQUIVALENCE (DC(1),D(1401)),(UPN2,D(205)),(UNN2,D(206)),
(ULTF,D(122)),(T(1),T(1317)),(TSEC(1),CD(1501)),
(ALPV(1),T(1594)),(ALPH(1),T(1565)),(ALPT(1),T(1877)),(ALNV(1),T(1576)),
(ALNM(1),T(1587)),(ALNT(1),T(1888)),(TDGH(1),T(1430)),
(DMV(1),T(1598)),(DMH(1),T(1609)),(DMT(1),T(1620)),
(ULTPH(1),TSEC(1)),(ULTPV(1),TSEC(12)),(ULTNV(1),TSEC(111)),(ULTNH
(1),TSEC(122)),(GJRDD(1),T(1668)),(DMV(1),T(122)),
(DDMR,TDGH(2)),(DDMK,TDGH(3)),(TBRK,TDGH(4)),
(INCASE,ND(160)),(NDOW,ND(156)),(TGM,ND(161)),(IOP),ND(182)),
(INPAGE,ND(185)),(ILID,ND(194)),(IN,ND(130)),(IK,ND(131))
EQUIVALENCE (UVFS(1),TSEC(23)),(UVMS(1),TSEC(134)),
(ULTPT(1),TSEC(144)),(ULTNT(1),TSEC(155)),
(SDMV(1),T(1844)),(SDMH(1),T(1855)),(SDMT(1),T(1866)),
(RLDS(1),CD(1400)),
(TDMV(1),CD(1868)),(TDMH(1),CD(1879)),(TDMT(1),CD(1890)),
(DVFSRS(1),CD(1824)),(DVFS(1),D(1842)),(DVMS(1),D(1853))
DIMENSION STMV(11),STMH(11),STMT(11)
EQUIVALENCE (STMV(1),T(1811)),(STMH(1),T(1822)),(STMT(1),T(1833))
1004 FORMAT (10H) CASE(4,10X,4BH--DESIGN LOADS/1000 AND REQ GJ/I
,800,000---,17X,21H-- VLOAD= (PI24) **/180,15X,8H 10M,11,
7H NDDM=11,7H IOP=11,8H DGM,FB.1)
1005 FORMAT (10BH0 STA +V(ULT) +H(ULT) +T(ULT) -V(ULT) -H(UL
T) -T(ULT) NM(10) NM(10) TM(10) GJ/REQ )
104 FORMAT (1H 3X,12,F10.3,F11.2,F10.2,F9.3,F10.2,F10.2,F9.3,F10.2,F10
.2,F12.3)

```

OVERLAY (17, 0)

DATA GENERATION AND OUTPUT DATA PROCESSING

PROGRAM TABLE OF CONTENTS AND REFERENCES,
AND TABLE OF DIAGNOSTICS

Preceding page blank

FORTRAN MODULE WING AND EMPENNAGE MODULE -

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - PROCEDURES

(000021)	2.04	10	(000019)	2.03	(000019)	2.03
(000020)	2.08	20	(000027)	2.07	(000027)	2.07

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE MODATA

(000041)	5.01	MODATA	(000021)	2.04-X
(000085)	5.01	100		
(000086)	5.02		(000087)	5.03
(000087)	5.03	1001		
(000091)	5.05		(000092)	5.06
(000092)	5.06	1002		
(000096)	5.09		(000097)	5.10
(000097)	5.10	1003		
(000112)	5.12	101		
(000114)	5.14		(000115)	5.15
(000115)	5.15	1010		
(000117)	5.17		(000118)	5.18
(000119)	5.18	1011		
(000120)	5.20		(000129)	5.27
(000129)	5.27	102		
(000132)	5.29		(000133)	5.30
(000133)	5.30	1020		
(000136)	5.32		(000137)	5.33
(000137)	5.33	1021		
(000141)	5.35		(000142)	5.35
(000142)	5.35	1022		
(000145)	5.38		(000146)	5.39
(000146)	5.39	1023		
(000150)	5.41		(000151)	5.42
(000151)	5.42	1024		
(000155)	5.44		(000156)	6.01
(000156)	6.01	1025		
(000160)	6.03		(000163)	6.04
(000163)	6.04	1026		
(000166)	6.06	110	(000309)	6.13
(000167)	6.07	111	(000307)	6.14
(000172)	6.10		(000173)	6.11
(000173)	6.11	112		
(000174)	6.14		(000178)	6.15
(000179)	6.15	1120		
(000183)	6.17		(000184)	6.18
(000184)	6.18	113		
(000188)	6.23		(000202)	6.26
(000202)	6.26	114		
(000209)	6.29	115		
(000212)	6.30	117	(000200)	6.20
(000224)	6.36		(000226)	6.38
(000228)	6.38	118		
(000236)	7.01	1180		
(000239)	7.02	1181	(000235)	6.40
(000239)	7.03	1182		
(000245)	7.04	1183	(000238)	7.02
(000268)	7.11		(000281)	7.19
(000268)	7.13	119		
(000272)	7.14	120	(000267)	7.12
(000275)	7.15	121	(000267)	7.12
(000276)	7.16	122		
(000277)	7.17	123	(000269)	7.13
(000281)	7.19	124	(000272)	7.14
(000288)	7.21	1240	(000276)	7.16
			(000275)	7.15

06/10/74		TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP	
CARD 10	PAGE/BOX	NAME	REFERENCES	(SOURCE	SEQUENCE NO. AND PAGE/BOX)
(000294)	0.02		(000298)	0.05	
(000298)	0.05	905			
(000299)	0.08		(000301)	0.11	
(000301)	0.11	904			
(000305)	0.12	125	(000106)	0.08	(000295) 7.20
(000308)	0.13	127	(000305)	0.12	
(000308)	0.14	126			
(000312)	0.15	128	(000305)	0.12	
(000316)	0.17		(000317)	0.18	
(000317)	0.18	1280			
(000324)	0.21		(000325)	0.22	
(000325)	0.22	1281			
(000332)	0.26		(000333)	0.27	
(000333)	0.27	1282			
(000345)	0.34	130			
(000359)	0.01	201			
(000370)	0.10		(000373)	0.11	
(000373)	0.11	202			
(000376)	0.13		(000378)	0.14	
(000378)	0.14	2020			
(000384)	0.16	203			
(000407)	0.18		(000408)	0.21	
(000409)	0.21	205			
(000413)	0.24		(000415)	0.27	
(000415)	0.27	2050			
(000419)	0.30		(000421)	0.33	
(000421)	0.33	2051			
(000425)	0.36		(000427)	0.39	
(000427)	0.39	2052			
(000431)	0.42		(000433)	10.01	
(000433)	10.01	2053			
(000437)	10.04		(000438)	10.07	
(000438)	10.07	2054			
(000443)	10.10		(000445)	10.13	
(000445)	10.13	2055			
(000448)	10.16		(000451)	10.19	
(000451)	10.19	2056			
(000455)	10.20	250	(000483)	0.15	
(000456)	10.21		(000457)	10.22	
(000457)	10.22	251			
(000461)	10.24		(000463)	11.25	
(000464)	10.41	252			
(000501)	11.02	253	(000483)	10.40	
(000502)	11.03	254			
(000508)	11.07	255	(000501)	11.02	
(000510)	11.08	256			
(000517)	11.12	257	(000508)	11.07	
(000518)	11.13	258			
(000525)	11.17	259	(000517)	11.12	
(000543)	11.25	260			
(000547)	11.27	261			
(000548)	11.28	262	(000546)	11.26	
(000560)	11.29	263			
(000562)	11.30	264	(000548)	11.28	
(000563)	11.31	265			
(000566)	11.32	266	(000562)	11.30	
(000566)	11.33	267			
(000568)	11.34	268	(000565)	11.32	
(000580)	11.35		(000588)	12.12	
(000588)	12.12	269			
(000602)	12.17	270	(000600)	12.16	
(000608)	12.20		(000612)	12.21	
(000612)	12.21	271			
(000616)	12.22	272	(000600)	12.16	
(000617)	12.23	273			
(000620)	12.25	0000			
(000620)	12.25		(000620)	12.26	
(000625)	12.28	274	(000600)	12.16	(000613) 12.21 (000616) 12.22
(000626)	12.29	275			
(000650)	13.06	280			
(000684)	13.08		(000686)	13.11	
(000686)	13.11	283			

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 3
CARD ID	PAGE/BOX	NAME	REFERENCES	SOURCE SEQUENCE NO. AND PAGE/BOX	
(000673)	13.12	210	(000625)	12.28	(000657) 13.05
(000674)	13.13		(000675)	13.14	
(000675)	13.14	2100			
(000676)	13.15	209	(000677)	13.15	
(000680)	13.17	211			
(000685)	13.18	220			
(000686)	13.19	221	(000679)	13.16	
(000690)	13.20	259	(000677)	13.15	(000685) 13.18

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PRIO

(000701)	17.01	PRIO	(000745)	8.34-X	
(000743)	17.01	400			
(000744)	17.02		(000745)	17.03	
(000745)	17.03	401			
(000749)	17.05		(000820)	18.03	
(000750)	17.06	402			
(000787)	17.15	403			
(000816)	18.01	404			
(000817)	18.02	405	(000815)	17.24	
(000820)	18.03	409	(000749)	17.05	
(000823)	18.05		(000824)	18.06	
(000824)	18.06	407			
(000826)	18.08		(000832)	18.10	
(000832)	18.10	408			
(000841)	18.12	410			
(000850)	18.15	4107			
(000852)	18.16	4108	(000849)	18.14	
(000853)	18.17	4109	(000851)	18.15	
(000855)	18.18	411	(000849)	18.14	
(000856)	18.19	4110	(000854)	18.17	
(000857)	18.20	4111			
(000859)	19.01	4112	(000856)	18.19	
(000860)	19.02	4113	(000858)	18.20	
(000863)	19.04	412			
(000872)	19.05	420			
(000873)	19.07	422			
(000884)	19.09	424			
(000885)	19.10	426			
(000902)	19.14	428	(000899)	19.13	
(000912)	20.01	4285	(000899)	19.13	
(000922)	20.03	429	(000899)	19.13	
(000934)	20.07		(000938)	20.10	
(000935)	20.08	4290			
(000937)	20.09	4291	(000934)	20.07	
(000938)	20.10	4292	(000936)	20.08	
(000948)	20.12	430	(000909)	19.15	(000919) 20.02
(000948)	20.13	4300	(000948)	20.12	
(000951)	20.14	4302			
(000957)	20.16	440			
(000950)	20.17	442			
(000967)	20.19	450	(000946)	20.12	
(000968)	20.20	451			
(000972)	20.21	455			
(000981)	20.24	457	(000987)	20.18	
(000992)	20.26	460			
(000995)	21.01	461	(000992)	20.26	
(000998)	21.02		(000998)	21.03	
(000998)	21.03	4610			
(001002)	21.05		(001003)	21.06	
(001003)	21.06	462			
(001005)	21.07	463			
(001006)	21.08		(001106)	22.15	
(001007)	21.09	464			
(001013)	21.10	465			
(001024)	21.13	466			
(001030)	21.14	467			

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEET			PAGE 4
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO) AND PAGE/BOX			
(001036)	21.15	468	(001103)	22.14		
(001042)	21.16	469	(001103)	22.14		
(001043)	21.17	470				
(001049)	22.01	471	(001103)	22.14		
(001054)	22.02	472	(001033)	21.14	(001039)	21.15
(001075)	22.07	473	(001072)	22.06	(001046)	21.17
(001081)	22.08	476				
(001096)	22.12	474	(001072)	22.06		
(001102)	22.13	475	(001093)	22.11		
(001106)	22.15	479	(001006)	21.08	(001042)	21.16
(001109)	22.16	480	(001103)	22.14		
(001110)	22.17		(001117)	23.01		
(001117)	23.01	481				
(001120)	23.02	482				
(001121)	23.03		(001122)	23.04		
(001122)	23.04	483				
(001125)	23.05	490				
(001129)	23.07	4901				
(001132)	23.08	492	(001222)	24.10		
(001138)	23.09	4921				
(001147)	23.11	4923				
(001166)	23.15	493				
(001167)	23.16	4930				
(001176)	23.20	4933	(001173)	23.19		
(001182)	24.01	4934	(001173)	23.19		
(001186)	24.03	4937	(001173)	23.19		
(001192)	24.05	494	(001166)	23.15	(001177)	23.21
(001193)	24.06		(001194)	24.07	(001183)	24.02
(001194)	24.07	4940				
(001197)	24.08	4941	(001193)	24.06		
(001203)	24.09	4943				
(001210)	24.11	4945	(001195)	24.07		
(001213)	24.12	491	(001210)	24.11		
(001214)	24.13	4910				
(001220)	24.17		(001221)	24.10		
(001221)	24.18	4912				
(001226)	25.01	499	(000932)	20.26	(001210)	24.11
(001227)	25.02	500	(001213)	24.12		
(001251)	25.11	506				
(001255)	25.13	599	(001226)	25.01	(001250)	25.10

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE TBFMI

(001265)	29.01	TBFMI	(000212)	6.30-X		
(001292)	29.01	100				
(001293)	29.02		(001294)	29.03		
(001294)	29.03	101				
(001298)	29.05		(001513)	35.01		
(001301)	29.07	102				
(001303)	29.09	1020				
(001304)	29.10	1021	(001302)	29.08		
(001305)	29.11	103	(001300)	29.06		
(001332)	30.02	110	(001420)	30.15		
(001333)	30.03		(001334)	30.04		
(001334)	30.04	111				
(001336)	30.06		(001337)	30.07		
(001337)	30.07	112				
(001353)	30.12	113	(001350)	30.11		
(001420)	30.15	124	(001358)	30.14	(001425)	32.13
(001361)	31.01	114	(001358)	30.14	(001446)	34.07
(001363)	31.03	115				
(001364)	31.04	116	(001362)	31.02		
(001366)	31.05	1160	(001449)	34.08	(001451)	34.09
(001380)	31.10	1169	(001481)	33.13	(001510)	34.14
(001382)	31.12	117				
(001384)	31.14	1170				
(001385)	31.15	1171	(001383)	31.13		

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP		PAGE 5	
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)			
(001306)	31.16	110	(001301)	31.11		
(001401)	32.01	119	(001422)	32.12		
(001406)	32.03	120	(001408)	32.05		
(001407)	32.04	121				
(001409)	32.06	122	(001406)	32.03		
(001425)	32.13	123	(001422)	32.12		
(001404)	32.14	145	(001425)	32.13	(001455)	33.02
(001405)	32.15	146			(001463)	33.08
(001407)	32.17	147				
(001408)	32.18	148	(001406)	32.16		
(001432)	33.01	125	(001428)	30.15		
(001455)	33.02	140	(001432)	33.01		
(001456)	33.03	141				
(001458)	33.05	142				
(001459)	33.06	143	(001457)	33.04		
(001466)	33.09	144	(001463)	33.08		
(001437)	34.01	130	(001350)	30.11		
(001438)	34.02	131	(001440)	34.04		
(001439)	34.03	132				
(001441)	34.05	133	(001438)	34.02		
(001449)	34.08	134	(001446)	34.07		
(001450)	34.09	135				
(001495)	34.10	149	(001492)	32.20		
(001513)	35.01	150	(001425)	32.13	(001404)	32.14
(001518)	35.03	151			(001492)	32.20
(001519)	35.04				(001432)	33.01
(001520)	35.05	152	(001559)	35.29		
(001521)	35.06	153	(001523)	35.08		
(001522)	35.07	154				
(001524)	35.09	155	(001521)	35.06		
(001527)	35.11	156				
(001530)	35.12	157	(001527)	35.11		
(001532)	35.14	158				
(001533)	35.15	159				
(001534)	35.16	160	(001531)	35.13	(001532)	35.14
(001545)	35.21	161	(001547)	35.23		
(001546)	35.22	162				
(001548)	35.24	163	(001545)	35.21		
(001559)	35.29	164	(001519)	35.04	(001527)	35.11
(001564)	35.30	170	(001517)	35.02		
(001565)	35.01		(001568)	36.02		
(001568)	35.02	171				
(001570)	35.04	172				
(001571)	35.05	1720	(001569)	36.03		
(001573)	35.07	1721				
(001574)	35.08	1722	(001572)	36.06		
(001576)	35.10	1723				
(001577)	35.11	1724	(001575)	36.09		
(001579)	35.13	1725				
(001581)	35.14	1726	(001578)	36.12		
(001582)	35.15		(001586)	36.18		
(001585)	35.17	173				
(001586)	35.18	174	(001584)	36.16		
(001588)	35.20		(001589)	36.21		
(001589)	35.21	1740				
(001592)	35.23	175				
(001597)	35.25		(001601)	36.27		
(001601)	35.27	176				
(001607)	35.29	180				
(001608)	35.30	181				
(001610)	35.32		(001620)	36.35		
(001620)	35.35	187				
(001624)	35.38		(001626)	36.41		
(001628)	35.41	188				
(001630)	35.42	189	(001607)	36.29		

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE WFLDD

(001641)	39.01	WFOO	(000680)	13.17-X	
(001677)	39.01	150			
(001687)	39.09	1501			
(001705)	39.11	1542	(001696)	39.08	
(001706)	39.12		(001710)	39.18	
(001708)	39.16	1543			
(001710)	39.18	155	(001708)	39.15	
(001716)	39.23	156			
(001719)	39.25	120	(001715)	39.22	
(001720)	39.26		(001723)	39.27	
(001723)	39.27	121			
(001737)	39.32	1210			
(001739)	39.34	1211			
(001740)	39.35	1212	(001736)	39.31	(001738) 39.33
(001741)	39.36	1213			
(001743)	39.38	1214			
(001746)	39.39	1219	(001740)	39.35	(001742) 39.37
(001748)	39.41		(001759)	40.05	
(001753)	40.01	5501			
(001754)	40.02	5502			
(001756)	40.03	5505	(001752)	39.43	(001753) 40.01
(001759)	40.05	122			
(001764)	40.08	123			
(001765)	40.09	124	(001763)	40.07	
(001781)	40.17		(001789)	40.25	
(001782)	40.18	1240			
(001783)	40.19	1241			
(001785)	40.21	1242			
(001787)	40.23	1243			
(001788)	40.24	1244	(001782)	40.18	(001784) 40.20 (001786) 40.22
(001789)	40.25	1249	(001781)	40.17	
(001796)	40.27		(001810)	41.02	
(001809)	40.33	125			
(001817)	41.01	126	(001808)	40.32	
(001818)	41.02	127	(001814)	40.34	
(001827)	41.03	100			
(001835)	41.09	1010			
(001844)	41.11	1052	(001834)	41.08	
(001847)	41.15	1053			
(001850)	41.17	1054	(001846)	41.14	
(001851)	41.18		(001855)	41.24	
(001854)	41.22	1055			
(001855)	41.24	106	(001853)	41.21	
(001860)	41.29	1060			
(001863)	41.31	1061	(001859)	41.28	
(001864)	41.32		(001868)	41.38	
(001867)	41.36	1062			
(001868)	41.38	107	(001866)	41.35	
(001874)	41.43	108			
(001878)	41.45	499	(001873)	41.42	

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE WFOO

(001890)	44.01	WFOO	(000686)	13.18-X	
(001929)	44.02	170			
(001931)	44.04		(001935)	44.06	
(001935)	44.06	171			
(001942)	44.09		(001943)	44.10	
(001943)	44.10	172			
(001946)	44.11	178	(001928)	44.01	
(001947)	44.12		(001948)	44.13	
(001948)	44.13	179			
(001951)	44.14	180			
(001958)	44.17		(001967)	44.26	
(001960)	44.19	181			
(001961)	44.20	182			
(001963)	44.22	183			

06/10/74			TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET - SHEEP				
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)						
(001905)	44.24	184							
(001906)	44.25	185	(001900)	44.19	(001962)	44.21	(001994)	44.23	
(001907)	44.26	186	(001959)	44.18					
(001975)	44.28		(002027)	45.17					
(001981)	44.30		(001905)	44.31					
(001985)	44.31	187							
(001991)	44.32	188							
(001992)	44.33	1880							
(001993)	44.34	189							
(001994)	44.35	190							
(001996)	45.01	191	(001993)	44.34					
(001998)	45.03	192	(001995)	44.35					
(002003)	45.06		(002004)	45.07					
(002004)	45.07	193							
(002027)	45.17	194	(001991)	44.32	(001992)	44.33	(001993)	44.34	(001997) 45.02
(002039)	45.20		(002041)	45.21					
(002041)	45.21	201							
(002043)	45.23		(002044)	45.24					
(002044)	45.24	202							
(002048)	45.26		(002050)	45.27					
(002050)	45.27	203							
(002051)	45.28	204							
(002057)	46.02	205							
(002058)	46.03	206	(002056)	46.01					
(002059)	46.04	207							
(002062)	46.05	208	(002058)	46.03					
(002066)	46.07		(002070)	46.09					
(002070)	46.09	2010							
(002084)	46.13	209	(002081)	46.12					
(002090)	46.14	2090	(002081)	46.12					
(002095)	46.15	210	(002087)	46.13					
(002100)	46.17	211							
(002103)	46.18	212	(002099)	46.16					
(002106)	46.20	2120							
(002108)	46.22	2121							
(002109)	47.01	2122	(002107)	46.21					
(002110)	47.02	2123							
(002113)	47.03	2124	(002105)	46.19	(002109)	47.01			
(002119)	47.06	2125							
(002133)	47.12	2126	(002118)	47.05					
(002134)	47.14		(002264)	49.25					
(002143)	47.16	213							
(002144)	47.17	214							
(002149)	47.19		(002150)	48.01					
(002150)	48.01	2140							
(002181)	48.11	215	(002192)	48.18					
(002185)	48.13	2150							
(002186)	48.14	2151	(002184)	48.12					
(002187)	48.15	2152	(002189)	48.16	(002229)	49.07	(002230)	49.08	
(002189)	48.16	2153	(002186)	48.14					
(002190)	48.17	216							
(002191)	48.18	2160							
(002193)	48.19	217	(002189)	48.16	(002190)	48.17			
(002211)	48.26	2170							
(002225)	49.04	2171	(002210)	48.25					
(002226)	49.05	218							
(002227)	49.06	219							
(002230)	49.08	220							
(002231)	49.09	221	(002225)	49.04	(002226)	49.05			
(002243)	49.14	5002							
(002245)	49.15	5005	(002242)	49.13					
(002252)	49.18		(002254)	49.20					
(002254)	49.20	222							
(002259)	49.23		(002261)	49.24					
(002261)	49.24	223							
(002264)	49.25	224	(002142)	47.15	(002143)	47.16	(002188)	48.15	
(002268)	49.27		(002293)	50.03					
(002285)	49.33	225							
(002288)	50.01	226	(002284)	49.32					
(002292)	50.02	227	(002287)	49.33					
(002293)	50.03	228							
(002305)	50.04	229							

01/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOFLOW CHART SET SHEET			
CARD ID	PAGE/BOX	NAME	REFERENCES (SOURCE SEQUENCE NO. AND PAGE/BOX)			
1002331	50 10	230				
1002333	50 12		1002475	52 14		
1002338	50 13	231	1002333	50 12		
1002339	50 14	2310				
1002340	50 15	232				
1002341	50 16	2320				
1002346	50 17	233	1002340	50 15	1002341	50 16
1002349	50 19		1002351	50 20		
1002351	50 20	234				
1002356	50 23		1002358	50 24		
1002358	50 24	235				
1002383	51 04	240	1002333	50 12	1002338	50 13
1002384	51 05	241			1002339	50 14
1002385	51 06	2410				
1002386	51 07	242				
1002387	51 08	2420				
1002388	51 09	243	1002386	51 07		
1002391	51 11		1002393	51 12		
1002393	51 12	244				
1002398	51 15		1002400	51 16		
1002400	51 16	245				
1002423	51 22	250	1002383	51 04	1002384	51 05
1002424	51 23	2500			1002385	51 06
1002436	51 27	2501				
1002438	52 01	2502	1002435	51 26		
1002441	52 02	2503	1002437	51 27		
1002444	52 06	2511				
1002455	52 07	2512				
1002458	52 08	2515	1002453	52 05	1002454	52 06
1002467	52 12	251				
1002475	52 14	252	1002423	51 22	1002466	52 11
1002480	52 16	2530				
1002485	52 18		1002487	52 21		
1002487	52 21	2540				
1002494	52 24		1002496	52 27		
1002496	52 27	2530				
1002503	52 28	2532	1002479	52 15		
1002520	52 33	260				
1002524	52 34	499				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE TPINT(Y1,X1,Y0)

1002534	55 01	TPINT	1001768	40 10-X	1001770	40 12-X	1002200	40 21-X	1002205	40 23-X	1002214	40 27-X
			1002219	49 02-X								
1002552	55 01	100										
1002553	55 02		1002555	55 03								
1002555	55 03	101										
1002582	55 13	110	1002587	55 12								
1002595	55 14	111	1002592	55 13								
1002596	55 15	112	1002618	57 02								
1002597	55 16	113	1002595	55 14	1002619	57 03	1002620	57 04				
1002601	56 01	114	1002592	55 13	1002617	57 01	1002618	57 02	1002623	57 05		
1002602	56 02	115										
1002629	56 03	120	1002582	55 12	1002595	55 15	1002598	55 16	1002601	56 01	1002603	56 02
			1002607	56 06	1002609	56 07	1002620	57 04	1002625	57 07		
1002633	56 04	129										
1002606	56 05	116	1002592	55 13								
1002607	56 06	117	1002623	57 05								
1002608	56 07	118	1002606	56 05	1002624	57 06	1002625	57 07				
1002617	57 01	120	1002582	55 12								
1002618	57 02	121										
1002619	57 03	122										
1002620	57 04	123										
1002623	57 05	124	1002617	57 01								
1002624	57 06	125										
1002625	57 07	126										

CHART TITLE - NON-PROCEDURAL STATEMENTS

CARD ID PAGE/BOX NAME

REFERENCES (SOURCE SOURCE NO. AND PAGE/BOX)

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE CTOT

(002643)	00.01	CTOT	(001756)	40.03-X	(002745)	49.15-X	(002758)	52.00-X
(002647)	00.01	100						
(002648)	00.02		(002649)	00.03				
(002649)	00.03	101						
(002672)	00.04	110						
(002673)	00.05	111	(002675)	00.07				
(002674)	00.06	112						
(002676)	00.08	113	(002673)	00.05				
(002678)	01.01	120						
(002680)	01.02	121	(002682)	01.04				
(002681)	01.03	122						
(002683)	01.05	123	(002680)	01.02				
(002685)	01.06	130						
(002681)	01.07	131						
(002692)	01.08	132	(002694)	01.10				
(002693)	01.09	133						
(002695)	01.11	134	(002692)	01.08				
(002699)	01.12	136						
(002700)	01.13	137						
(002701)	01.14	138						
(002702)	01.15		(002704)	01.16				
(002704)	01.16	139						
(002707)	01.17	140	(002700)	01.13				
(002709)	01.19		(002712)	01.20				
(002712)	01.20	141						
(002716)	01.22	142	(002727)	01.31				
(002718)	01.24	143						
(002719)	01.25	144						
(002721)	01.26	1440	(002718)	01.24				
(002722)	01.27	1441	(002720)	01.25				
(002723)	01.28	145	(002717)	01.23	(002718)	01.24		
(002725)	01.30	146						
(002726)	01.31	147						
(002728)	02.01	148	(002724)	01.29	(002725)	01.30		
(002731)	02.02	150						
(002732)	02.03	151	(002743)	02.12				
(002734)	02.05	152						
(002735)	02.06	153						
(002737)	02.07	1530	(002734)	02.05				
(002738)	02.08	1531	(002736)	02.06				
(002739)	02.09	154	(002733)	02.04	(002734)	02.05		
(002741)	02.11	155						
(002742)	02.12	156						
(002744)	02.13	157	(002740)	02.10	(002741)	02.11		
(002747)	02.14	160	(002705)	01.16				
(002753)	02.15	170	(002689)	01.12				
(002754)	02.16	171						
(002763)	02.19		(002765)	02.22				
(002765)	02.22	9040						
(002768)	02.23	199	(002753)	02.15				

CHART TITLE - NON-PROCEDURAL STATEMENTS

CHART TITLE - INTRODUCTORY COMMENTS

CHART TITLE - SUBROUTINE PINTO

(002778)	05.01	PINTO	(002520)	52.33-X
(002806)	05.01	200		
(002809)	05.07	2121		
(002807)	05.09	2122	(002803)	05.06
(002801)	05.13	2123		
(002804)	05.15	2124	(002800)	05.12
(002806)	05.19	2125		
(002873)	05.21	2126	(002807)	05.10
(002876)	05.23	220		

06/10/74	TABLE OF CONTENTS AND REFERENCES		AUTOTON CHART SET - SHEEP			
CARD ID	PAIR NO.	NAME	REFERENCES	SOURCE	SEQUENCE NO.	AND PAIR NO.
(002877)	85 24	2200				
(002878)	85 25	221	(002875)	85 22	(002876)	85 23
(002879)	85 26	222				
(002880)	85 27	2220				
(002881)	85 28	223	(002878)	85 25	(002879)	85 26
(002882)	85 29		(002888)	85 35		
(002887)	85 33	2230				
(002888)	85 35	224	(002886)	85 32		
(002893)	86 02	225				
(002894)	86 03	2250				
(002898)	86 07	2251				
(002899)	86 09	2252	(002897)	86 06		
(002902)	86 13	2253				
(002905)	86 15	226	(002921)	86 01	(002933)	86 02
(002906)	86 16	227				
(002907)	86 17	2270				
(002911)	86 21	2271				
(002912)	86 23	2272	(002910)	86 20		
(002915)	86 27	2273				
(002919)	86 29	228	(002905)	86 15	(002906)	86 16
(002922)	86 31		(002928)	86 37		
(002927)	86 35	2280				
(002928)	86 37	229	(002926)	86 34		
(002934)	86 40		(002933)	87 05		
(002937)	86 42		(002939)	86 43		
(002939)	86 43	230				
(002942)	87 01	2300				
(002943)	87 05	231	(002941)	87 02		
(002948)	87 08		(002954)	87 14		
(002953)	87 12	2311				
(002954)	87 14	231	(002952)	87 11		
(002960)	87 15	232				

CHART TITLE - NON PROCEDURAL STATEMENTS

LOCATION		DIAGNOSTIC
CARD ID	PAGE/BOX	
1000171	2 02	UNRECOGNIZED SYNTAX
10001751	2 06	UNRECOGNIZED SYNTAX
10001121	9 12	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001201	9 19	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001211	9 20	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001221	9 22	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001231	9 23	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001241	9 24	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10001601	0 08	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003121	0 15	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10003221	0 19	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003261	0 23	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10003371	0 29	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003381	0 29	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003391	0 30	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003401	0 31	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003411	0 32	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003421	0 33	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003591	9 01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003601	9 02	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003611	9 03	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003621	9 04	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003631	9 05	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003641	9 06	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003651	9 07	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10003661	9 08	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10006171	12 23	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10006221	12 27	UNDEFINED - 'WRITMS' EXTERNAL REFERENCE
10018771	39 01	UNDEFINED - 'READMS' EXTERNAL REFERENCE
10018291	44 02	UNDEFINED - 'READMS' EXTERNAL REFERENCE

PROGRAM FLOW CHARTS

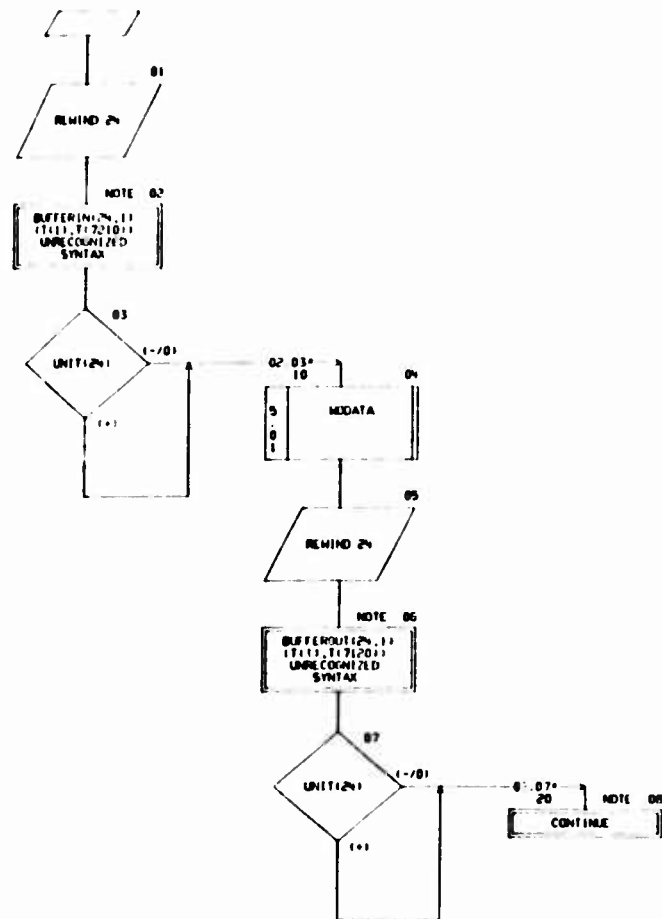
CHART TITLE - INTRODUCTORY COMMENTS

*****PROGRAM GLAY17*****

PROGRAM FOR SEVENTH OVERLAY OF WING/EMPENNAGE MODULE

DATA GENERATION AND OUTPUT DATA PROCESSING

CHART TITLE - PROCEDURES



06/10/76

AUTOFLOW CHART SET - SHEEP - WING AND EMPENNAGE MODULE - PAGE 03

CHART TITLE - NON PROCEDURAL STATEMENTS

PROGRAM OLAY17

COMMON T171201

COMMON /MISC/ IMISC11001

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE METADATA*****

MODULE OUTPUT DATA CONTROL - FINAL RESULTS

```

graph TD
    Start(( )) --> Note36[NOTE 36]
    Note36 --> Loop36[36  
BEGIN DO LOOP  
1022 I = 1, 48]
    Loop36 --> Calc36[35  
CC111 = 1051  
CCDL111 = 911]
    Calc36 --> Dec36[36  
1022]
    Dec36 --> End36{36  
END OF DO LOOP?}
    End36 -- NO --> Loop36
    End36 -- YES --> Note37[NOTE 37]
    Note37 --> Loop37[37  
BEGIN DO LOOP  
1023 I = 1, 5]
    Loop37 --> Calc37[38  
CC111 = 971  
1GA11 = 119]
    Calc37 --> Dec37[39  
1023]
    Dec37 --> End37{39  
END OF DO LOOP?}
    End37 -- NO --> Loop37
    End37 -- YES --> Clear[39  
**CLEAR MCG ARRAY**]
    Clear --> Note40[NOTE 40]
    Note40 --> Loop40[40  
BEGIN DO LOOP  
1024 I = 1, 126]
    Loop40 --> Calc40[41  
MCG11 = DC13]
    Calc40 --> Dec40[42  
1024]
    Dec40 --> End40{42  
END OF DO LOOP?}
    End40 -- NO --> Loop40
    End40 -- YES --> Add[42  
**ADD DELTA T-BON TO  
HTS DUE TO COL ITEMS**]
    Add --> Note43[NOTE 43]
    Note43 --> Loop43[43  
BEGIN DO LOOP  
1025 I = 1, 8]
    Loop43 --> Calc43[44  
CC111 = 1051  
DLTBN=CC111 = 1051]
    Calc43 --> Dec43[45  
00-01]
    Dec43 --> End43{45  
00-01}
    End43 -- NO --> Loop43
    End43 -- YES --> End(( ))

```

CHART TITLE - SUBROUTINE MODATA

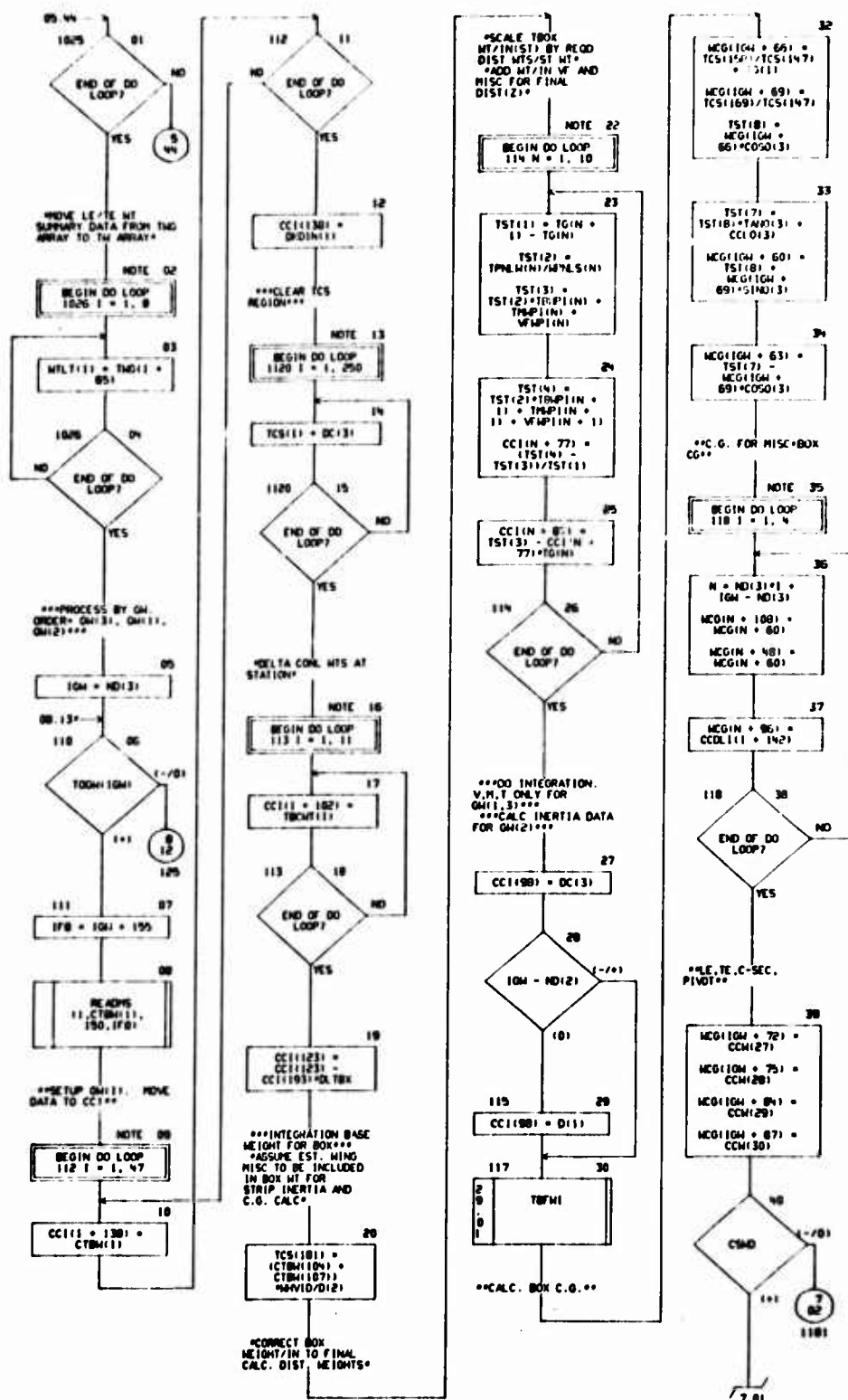
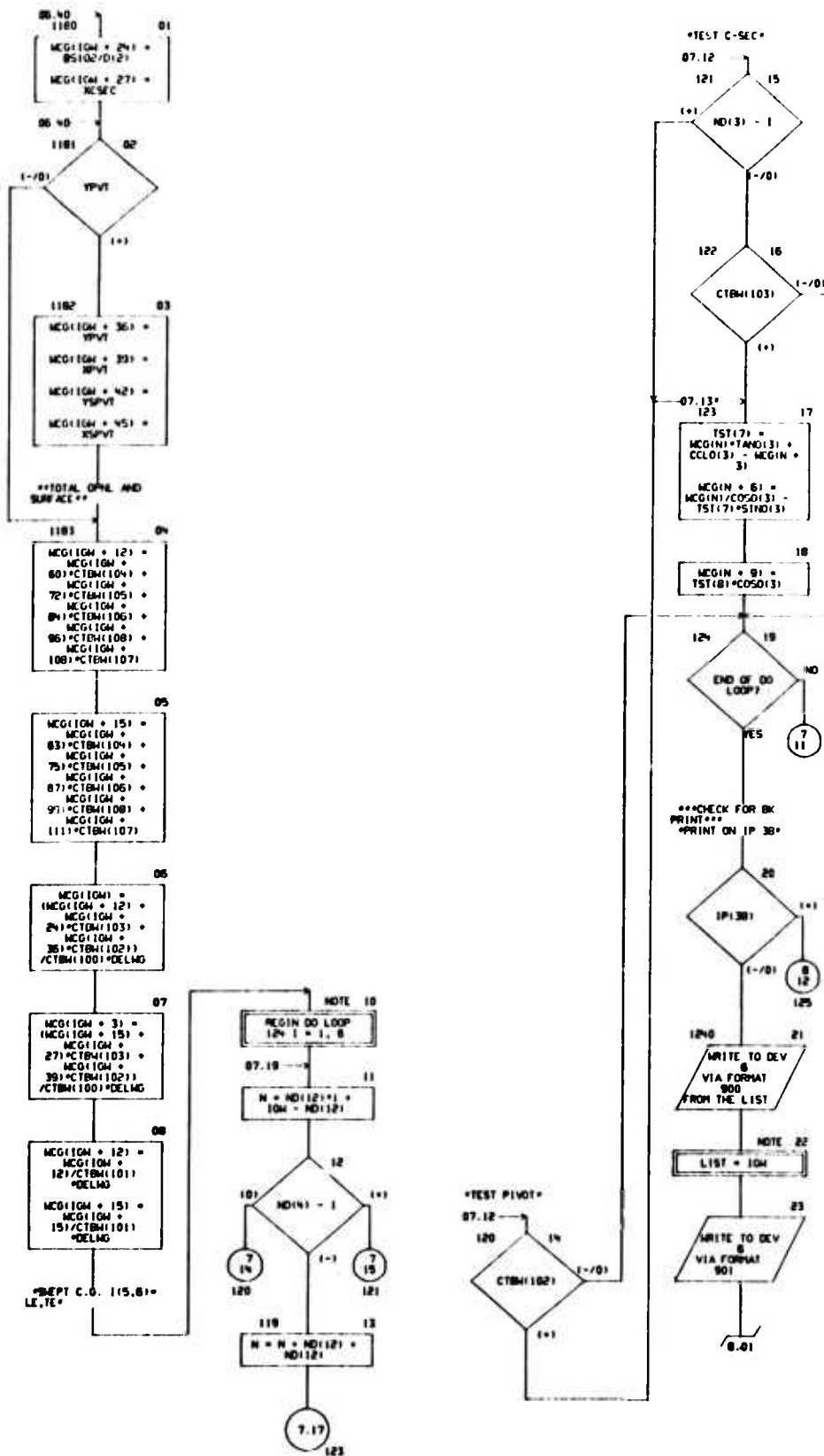


CHART TITLE - SUBROUTINE WDATA



CHAR? TITLE - SUBROUTINE MODATA

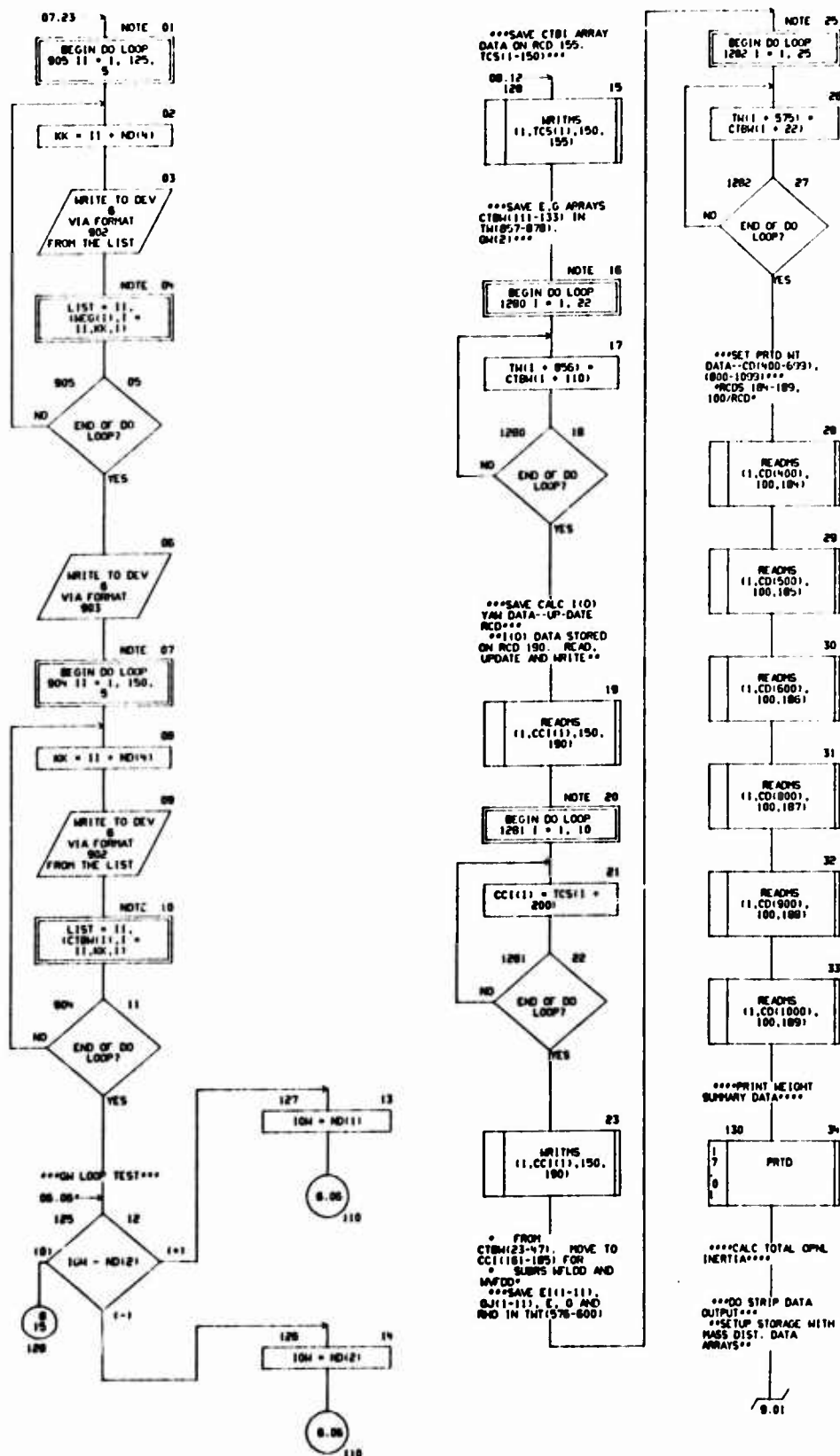


CHART TITLE - SUBROUTINE WDATA

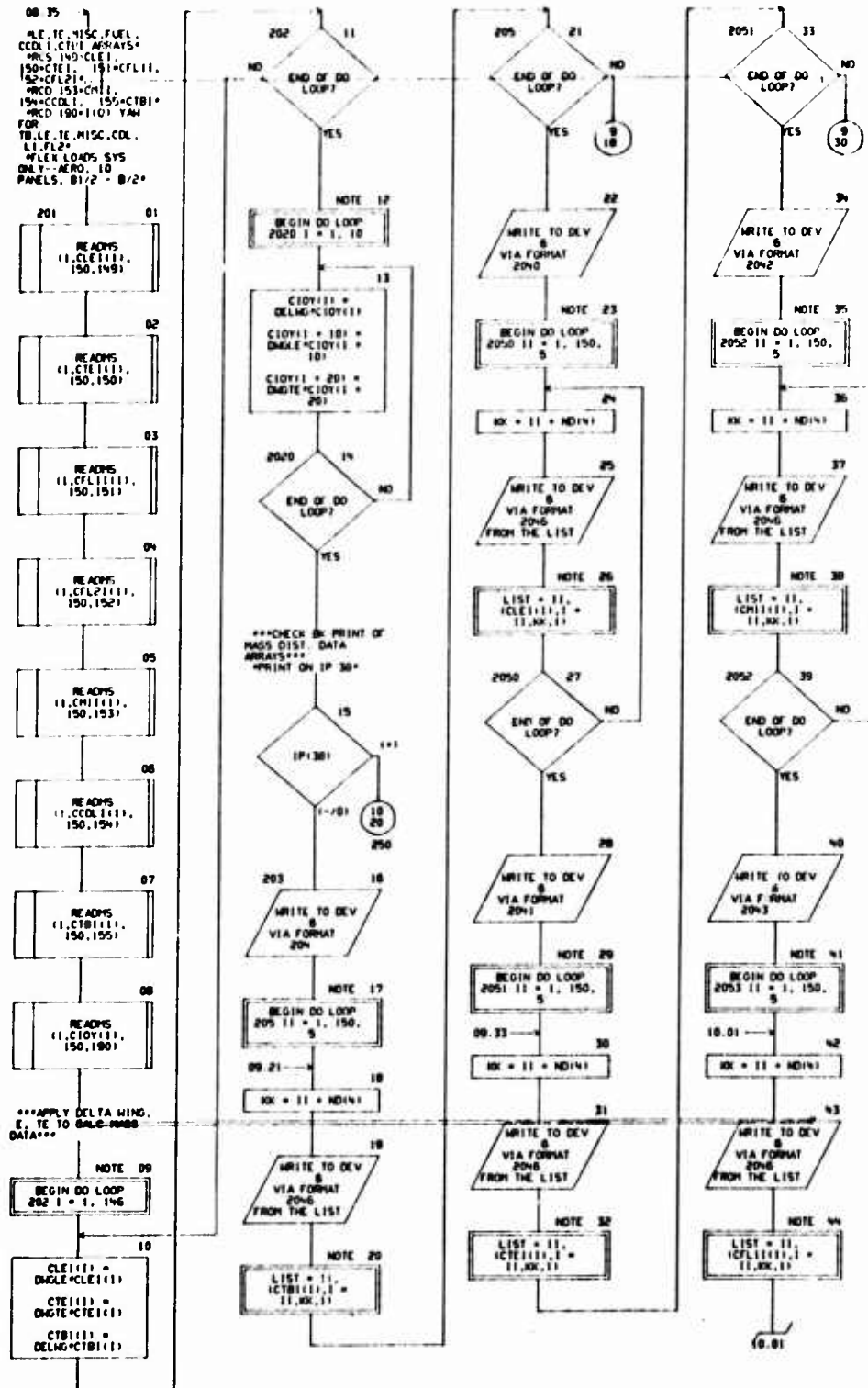


CHART TITLE - SUBROUTINE WDATA

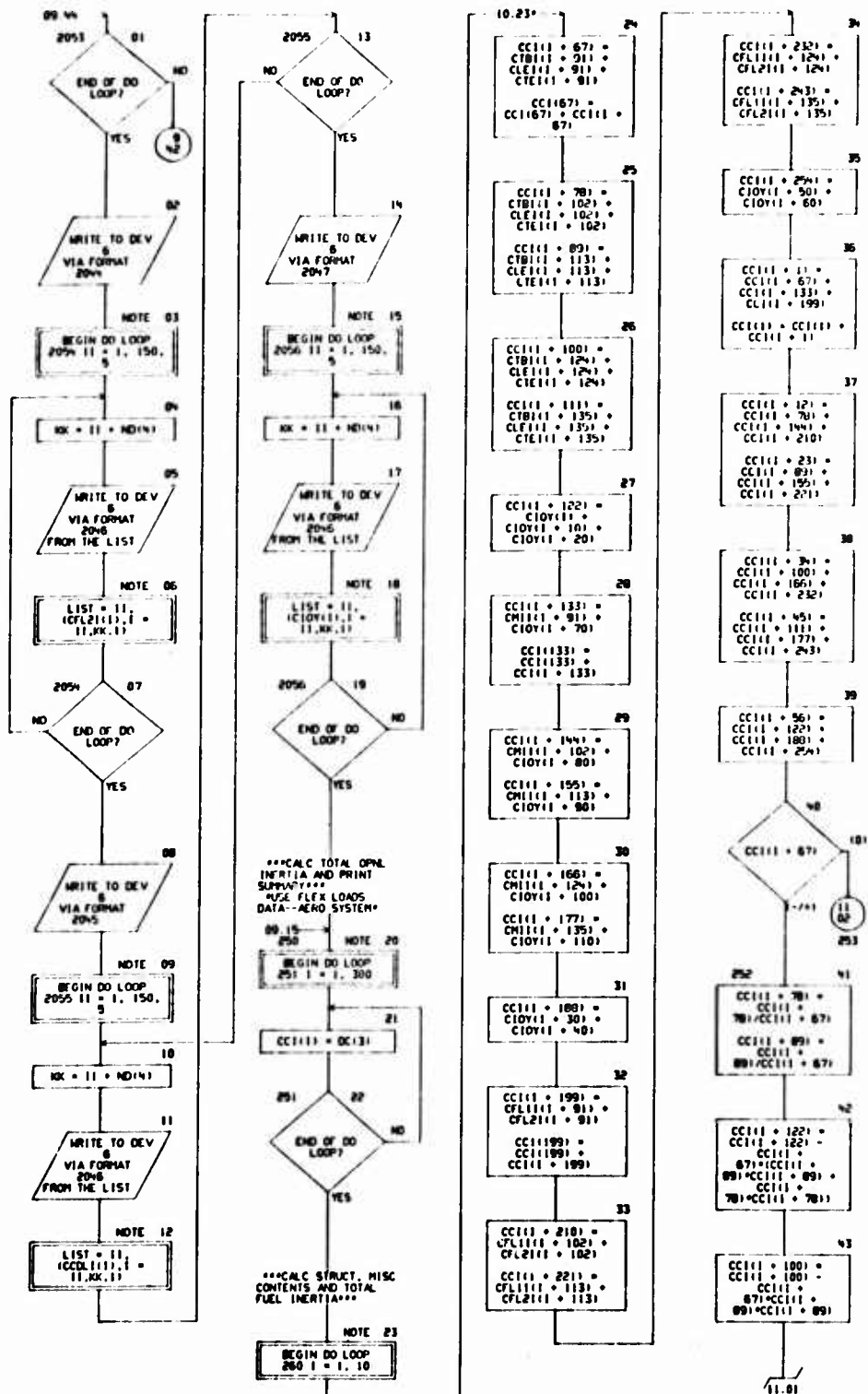


CHART TITLE - SUBROUTINE MODATA

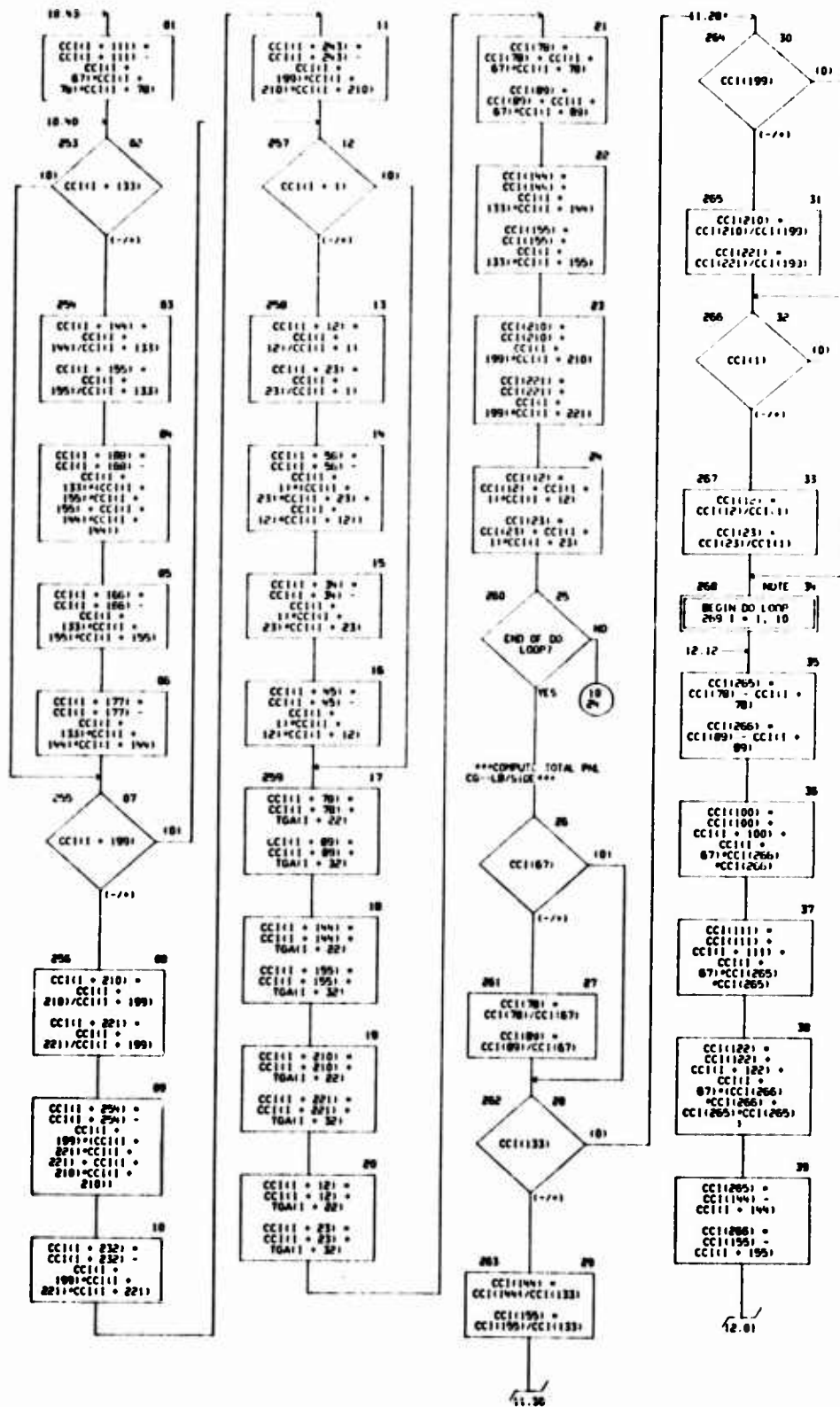


CHART TITLE: SUBROUTINE: MORTAL

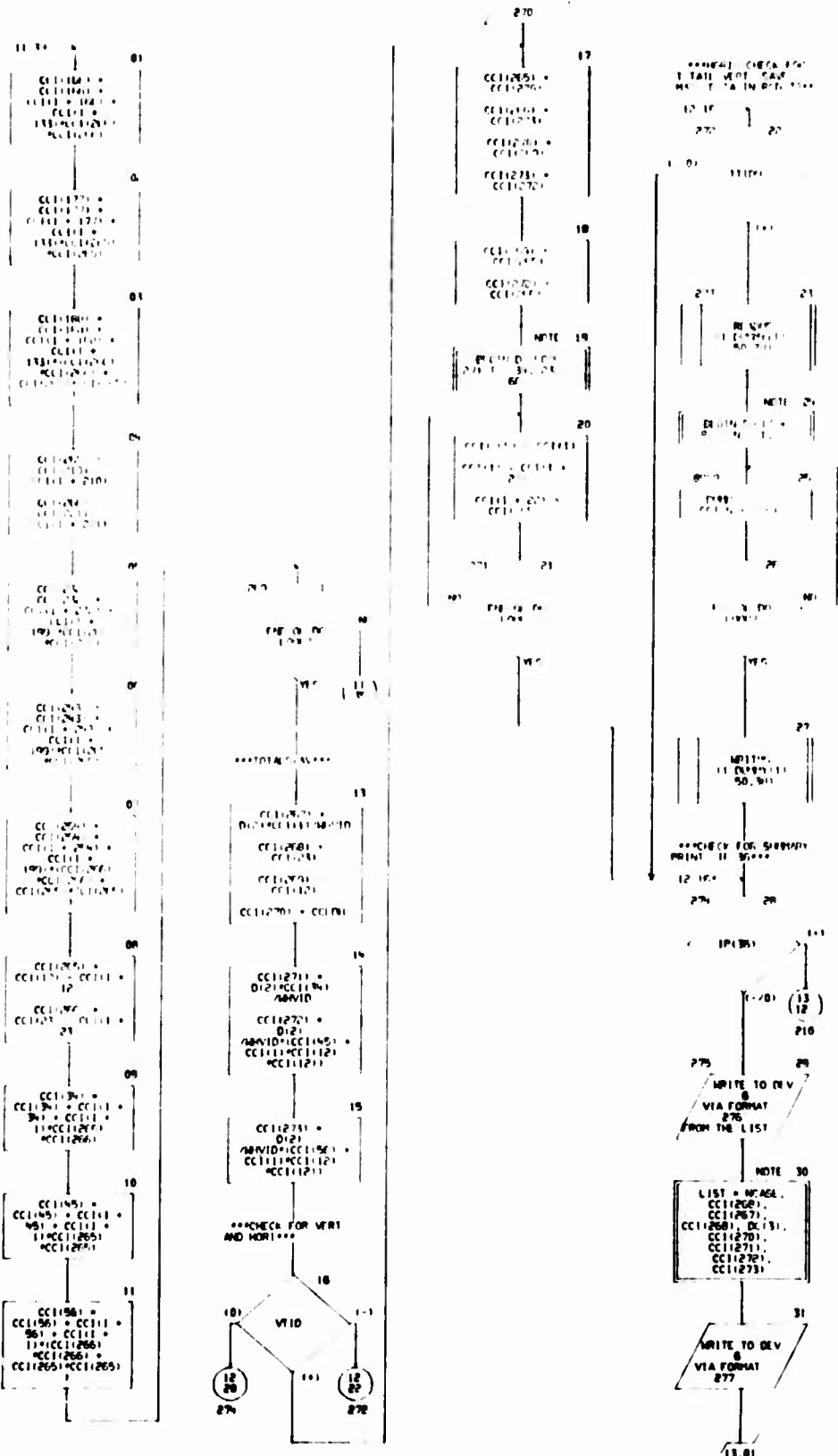


CHART TITLE - SUBROUTINE MODATA

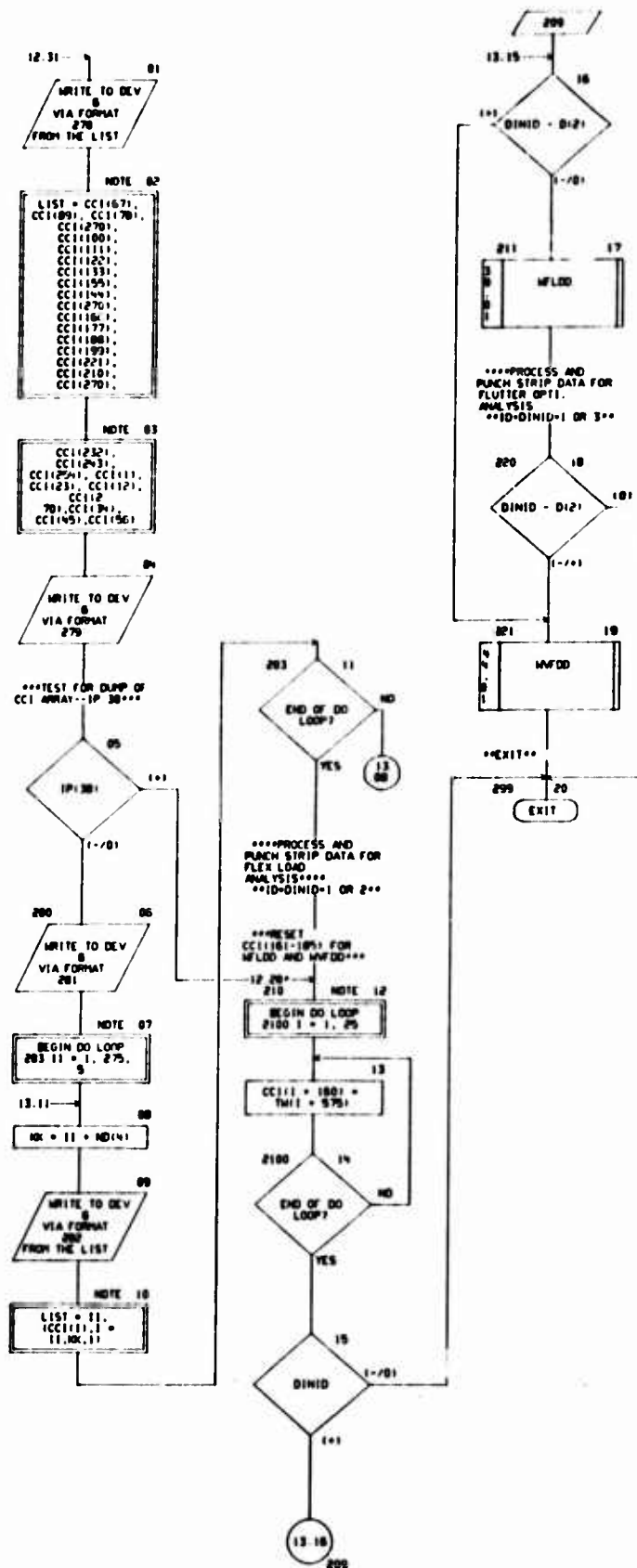


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(7120),D(2060),CD(2000),ND(100),DC(100),TW(900),
YC(150),YTC(80),TG(300),TNG(400),TGA(135),CC(1300),TCS(250),
CCW(50),CLE(1150),CTE(1150),CFL(1150),CFL2(1150),CML(1150),
CCOL(1150),TST(50),TGR(100),CTB(1150),CTBW(150),TWT(400),
TAND(9),CCLO(9),SIND(6),COS(6),
MCO(126),TOGM(3),MTIP(4),DND(115),
TBM(111),TBM2(111),WMP(111),
MPML(10),TPML(10),TBM7(11),
MTLT(8),CLOY(150),
T(24),TS(520)
DIMENSION DUMP(50)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TT(1),T(111)),(YC(1),T(201)),(YTC(1),T(351)),
(TW(1),T(1621)),(TWT(1),CD(1101)),(CTBW(1),CD(351)),
(TG(1),T(1001)),(TNG(1),T(1301)),(TGA(1),T(1051)),
(TST(1),T(1701)),(TGR(1),T(1751)),(CTB(1),CD(351)),
(CLE(1),CD(651)),(CTE(1),CD(801)),(CFL(1),CD(951)),
(CFL2(1),CD(1101)),(CML(1),CD(1251)),(CCOL(1),CD(1501)),
(CCC(1),CD(1651)),(TCS(1),CD(1401)),(CCW(1),CD(1)),
(DND(1),D(271)),(DND(1),D(1970)),
(TGM(1),ND(61)),(TGM(1),ND(971)),(TGM(1),ND(1291)),(TGM(1),ND(1931)),
(INPAC,ND(851)),(INPAC,ND(1601))
EQUIVALENCE (TAND(1),T(1271)),(CCLO(1),T(1311)),(SIND(1),T(1401)),
(COS(1),T(1461)),(BS(1),T(151)),(MVID,TS(1)),(TOGM(1),D(801)),
(DELD,TS(1071)),(DELD,TS(1101)),(DELD,TS(1191)),(DELD,TS(1191)),
(VPVT,TS(1391)),(VPVT,TS(1401)),(VPVT,TS(1411)),(VPVT,TS(1411)),
(INSEC,TS(1621)),(INSEC,TS(1401)),
(MTIP(1),T(641)),(TS(1),TW(1)),
(TBM(1),CTBW(1)),(TBM(1),CTBW(701)),(WMP(1),CTBW(891)),
(MPML(1),CTBW(101)),(TPML(1),CTBW(1501)),(TBM7(1),CTBW(121)),
(CLOY(1),CD(1401)),(CCLO(1),T(1311)),(VTD,TS(2091)),(VTD,TS(2091)),
(MCO(1),TW(701)),(MTLT(1),TW(8791))
900 FORMAT (47H) ***MODATA SUBR MEG AND CTBW ARRAYS***
    42X,21H** MODATA - (P130) **/1240 10M,121
901 FORMAT (6H0 MEG)
902 FORMAT (1H 14,5E10.0)
903 FORMAT (6H0 CTBW)
204 FORMAT (70H)
    ---TORQUE-BOX HEIGHT DISTRIBUTION SUMMARY-
    <CTB1 ARRAY-->,19X,21H** MODATA - (P130) **/640 CTB1
2040 FORMAT (72H)
    ---LEADING EDGE HEIGHT DISTRIBUTION SUMMAR
    Y--CLE1 ARRAY-->,17X,21H** MODATA - (P130) **/640 CLE1
2041 FORMAT (74H)
    ---TRAILING EDGE HEIGHT DISTRIBUTION SUMMA
    RY--CTE1 ARRAY-->,19X,21H** MODATA - (P130) **/640 CTE1
2042 FORMAT (88H)
    ---MISC. STRUCTURE AND CONTENTS HEIGHT DIS
    TRIBUTION SUMMARY--CH11 ARRAY-->,1X,21H** MODATA - (P130) **/
    640 CH11
2043 FORMAT (72H)
    ---FUEL CELL 1 HEIGHT DISTRIBUTION SUMMARY
    --CFL11 ARRAY-->,17X,21H** MODATA - (P130) **/640 CFL11
2044 FORMAT (72H)
    ---FUEL CELL 2 HEIGHT DISTRIBUTION SUMMARY
    --CFL21 ARRAY-->,17X,21H** MODATA - (P130) **/640 CFL21
2045 FORMAT (84H)
    ---EXTERNAL CONC. MAGS HEIGHT DISTRIBUTION
    SUMMARY--CCL11 ARRAY-->,9X,21H** MODATA - (P130) **/640 CCL11
2046 FORMAT (1H 14,5E10.0)
2047 FORMAT (1H1,68X,21H** MODATA - (P130) **/
    100H
    ---1101YAW DATA FOR TB,LE,TE,MISC,COL,FL1
    ,FL2,(FLEX LOADS, AERO SYSTEM)--CLOY ARRAY-->,70H CLOY
276 FORMAT (1H1,5X,4H0CASE,14,142.31H**SURFACE INERTIA SUMMARY-->,
    10X,21H** MODATA - (P136) **/112.63H**TOTAL EXPOSED PANEL INERTI
    A ABOUT SURFACE CENTER-LINE AT F.S.,PB.2,2H**/7X,54LB/AV,4X,
    7HUS/STA,4X,7H0/PLANE,3X,7H4/PLANE,2X,17H1/PITCH1LB-IN**2),2X,
    18H1/ROLL1LB-IN**2),2X,15H1/YAW1LB-IN**2)/

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CHART TITLE - NON PROCEDURAL STATEMENTS

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277      2X,F10.1,2F11.2,F10.2,3E10.0)
      FORMAT(1H0/125,51H**PANEL INERTIA ABOUT EXPOSED PANEL CG---PER SID
      E---//3X,WHITEN,5X,7H0/SIDE,4X,7H05/STA,4X,7H0/PLANE,3X,
      7H0/PLANE,2X,17H1/PITCHILB-IN**2),2X,18H1/ROLLILB-IN**2),2X,
      19H1/YAWILB-IN**2) )
278      FORMAT (5H STRUCT*,F10.1,2F11.2,F10.2,E17.0,2E10.0,5H MISC** ,F
      10.1,2F11.2,F10.2,E17.0,2E10.0,5H FUEL ,F10.1,2F11.2,F10.2,E17
      .0,2E10.0,5H TOTAL ,F10.1,2F11.2,F10.2,E17.0,2E10.0)
279      FORMAT (42H0 NOTE---DOES NOT INCLUDE C-SEC OR PIVOT.,50H
      **TIP PANEL MASS DATA INCLUDED WITH MISC CONTENTS.)
281      FORMAT (5H1
      ---PANEL INERTIA SUMMARY. FLEX LOADS (AERO
      ) SYSTEM-CC: ARRAY ** .11X,21H** MODATA - (P130) **/5H0 CC) )
282      FORMAT (1H (4,5E10.0)

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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE PRID*****

CALCULATED HEIGHT SUMMARY PRINT

1526

CHART TITLE - SUBROUTINE PH10

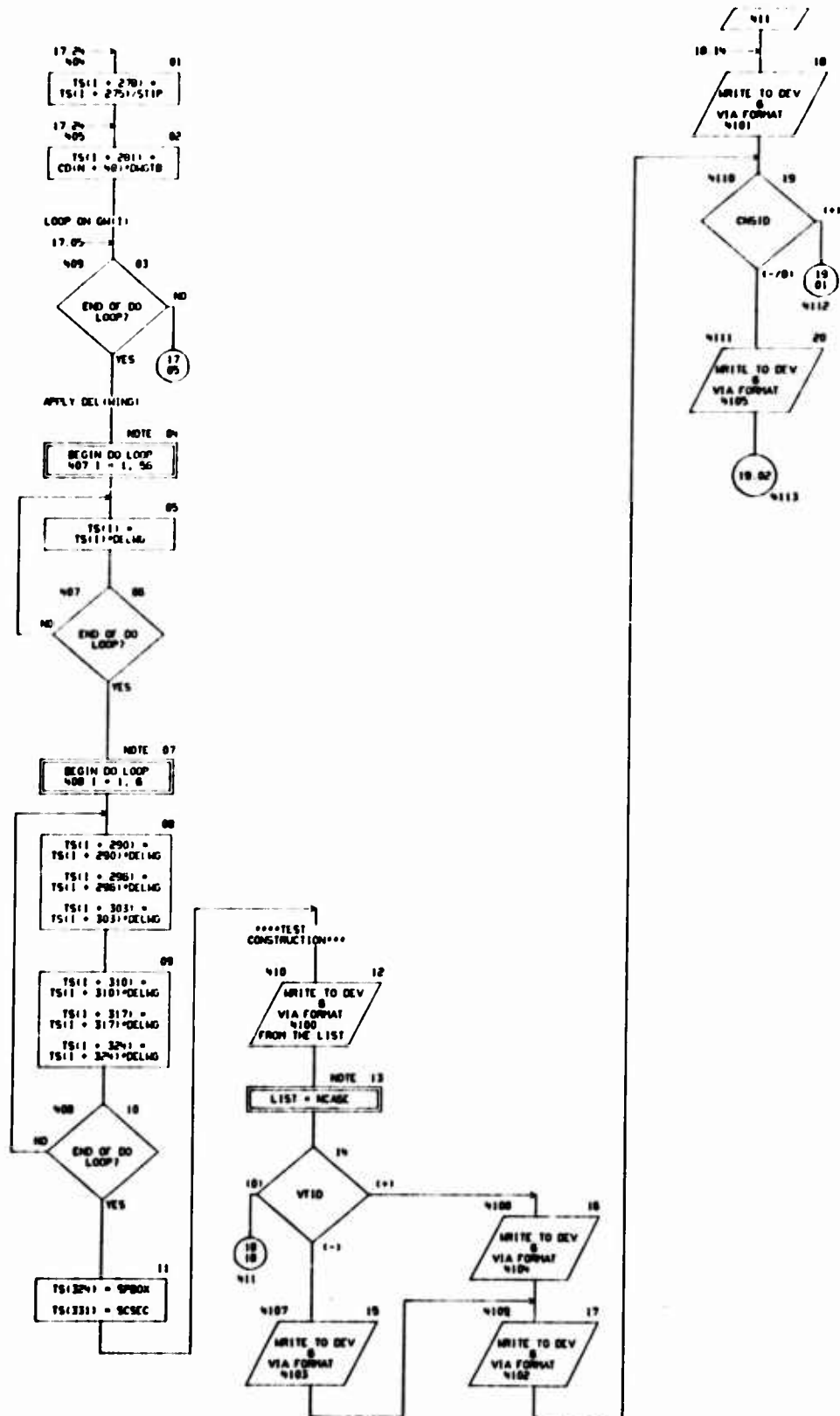


CHART TITLE - SUBROUTINE PRID

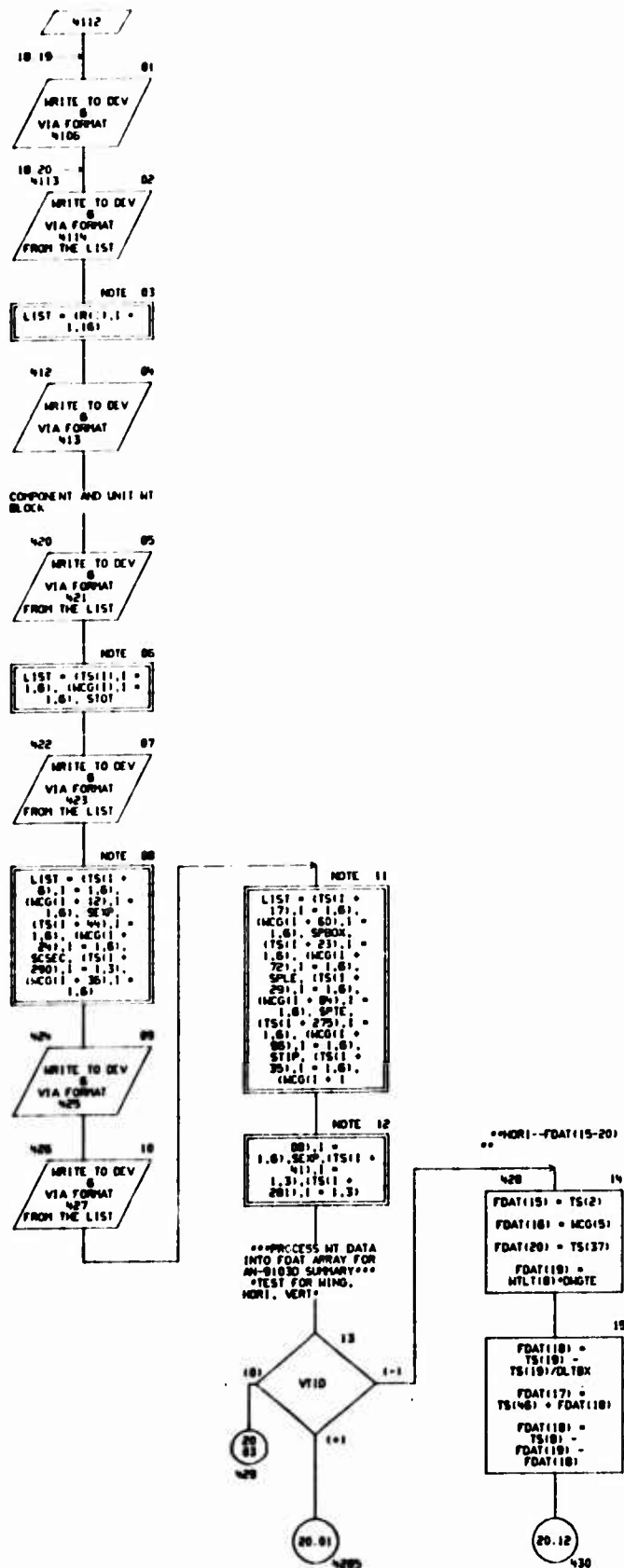


CHART TITLE - SUBROUTINE PRIO

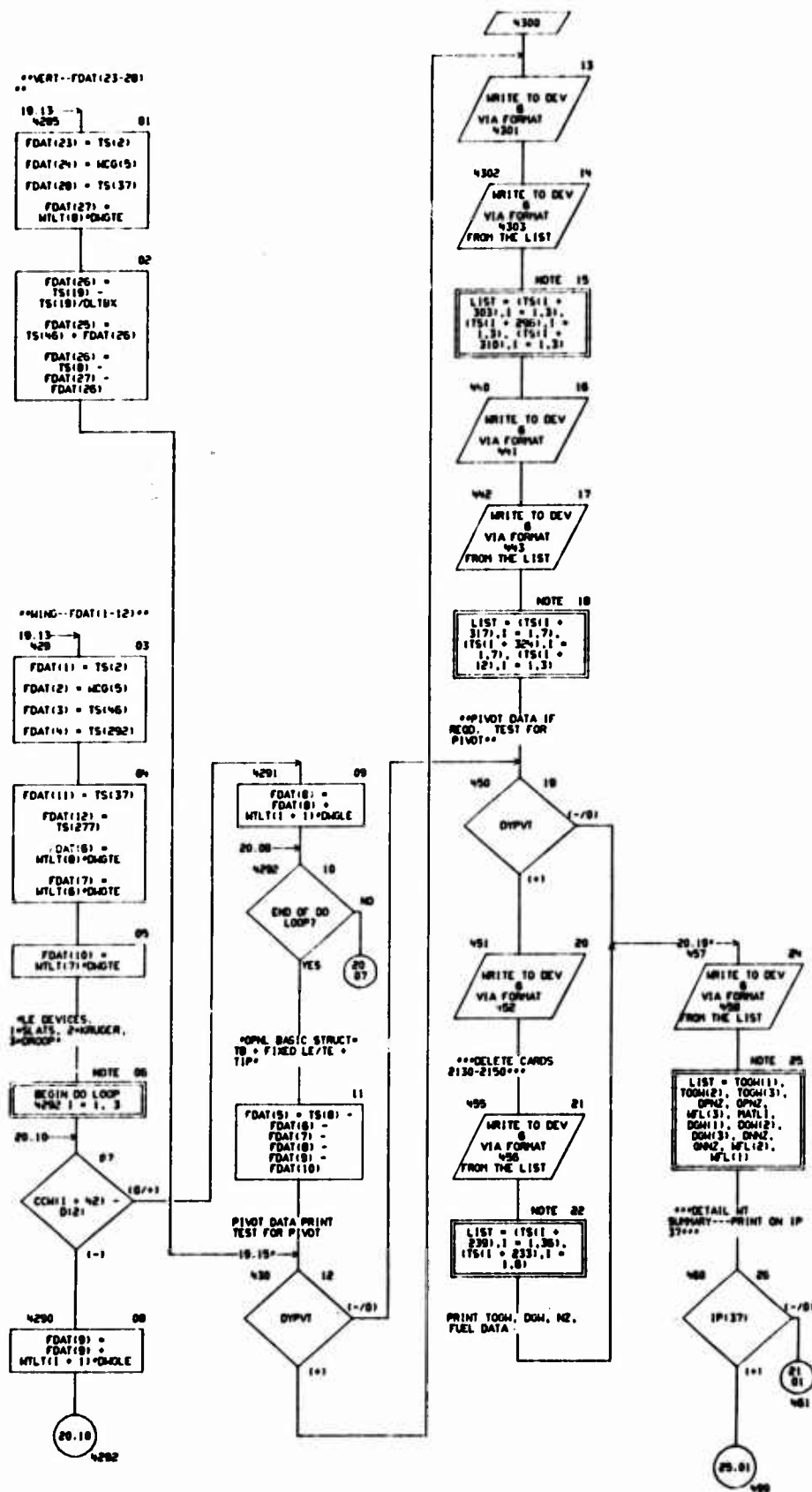


CHART TITLE - SUBROUTINE PRIO

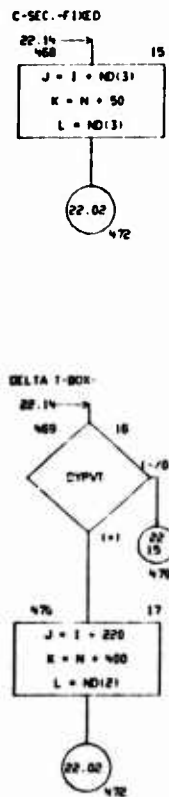
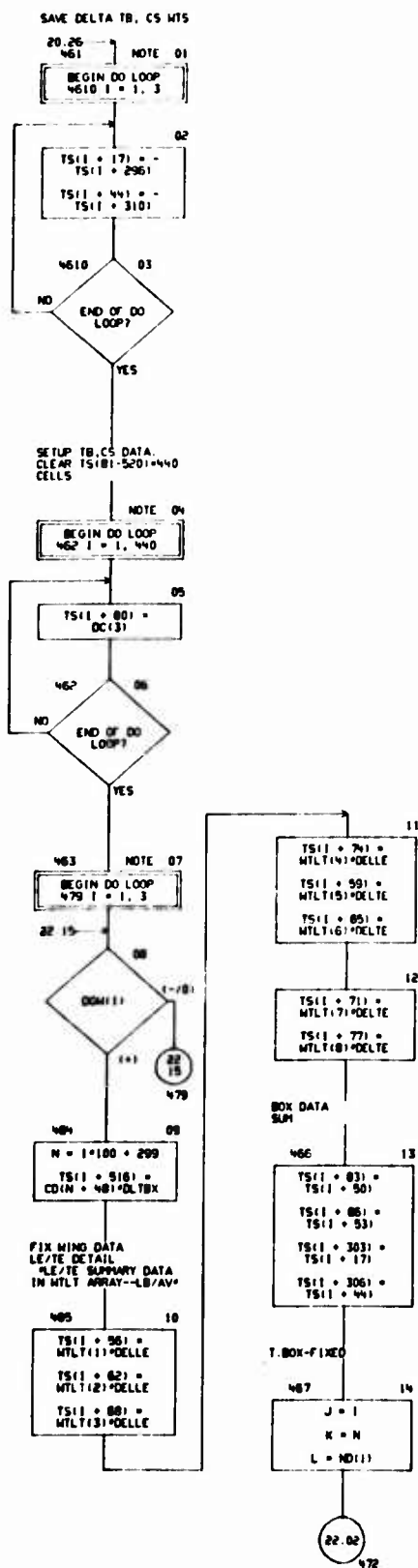


CHART TITLE - SUBROUTINE PRIO

DELTA C-SEC-

22.14
471 01
J = 1 + 223
K = N + 450
L = ND(1)

DO MOVE L = FIX TB, 2
DELTA TB, 3 C-S, 4
DELTA C-S

21.14
472 02
TSIJ = 1.11 +
CDIK = 81
TSIJ = 1101 +
CDIK = 101
TSIJ = 1191 +
CDIK = 111
TSIJ = 1371 +
CDIK = 121

03
TSIJ = 1461 +
CDIK = 131
TSIJ = 1551 +
CDIK = 141

I RIB, FS, RS, ATT

04
TSIJ = 1731 +
CDIK = 51
TSIJ = 2001 +
CDIK = 61
TSIJ = 2091 +
CDIK = 151
TSIJ = 2181 +
CDIK = 161

05
TSIJ = 2271 +
CDIK = 71
TSIJ = 2361 +
CDIK = 171
TSIJ = 2451 +
CDIK = 181
TSIJ = 2541 +
CDIK = 81

TEST FOR FX, DEL, OP
OR C-S

06
L = ND(2)
1-781
22.12
473

O-PNL

07
TSIJ = 911 +
CDIK = 21
TSIJ = 1281 +
CDIK = 31
TSIJ = 1821 +
CDIK = 301
TSIJ = 1911 +
CDIK = 311

DELTA W DETAIL

08
TSIJ = 2691 +
CDIK = 191
TSIJ = 2781 +
CDIK = 201
TSIJ = 2871 +
CDIK = 211
TSIJ = 2721 +
CDIK = 221

09
TSIJ = 2811 +
CDIK = 231
TSIJ = 2901 +
CDIK = 241
TSIJ = 2601 +
CDIK = 251
TSIJ = 2701 +
CDIK = 261

10
TSIJ = 2631 +
CDIK = 2721
TSIJ = 2811 +
CDIK = 2901
TSIJ = 2661 +
CDIK = 251
TSIJ = 2751 +
CDIK = 261

11
TSIJ = 2841 +
CDIK = 271
TSIJ = 2931 +
CDIK = 281
CDIK = 291

C-SEC

22.06
474 12
TSIJ = 921 +
CDIK = 31
TSIJ = 1281 +
CDIK = 41
TSIJ = 1911 +
CDIK = 191
TSIJ = 1821 +
CDIK = 131

EXIT ON L - SUM RIDS

475 13
TSIJ = 1641 +
TSIJ = 1731 +
TSIJ = 1821 +
TSIJ = 1911

14
COMPUTED GO TO
FOR L
468 21.15
471 22.01
469 21.16
479 22.15

IF OUTSIDE THE RANGE

ON LOOP

21.08
479 15
END OF DO
LOOP?
YES 21.08
NO

SUM FX(OPNL) * CSI, DELTA
PIVOT

NOTE 16
BEGIN DO LOOP
481 1 = 1, 20

23.01
17
J = 1 + ND(1)
TSIJ = 721 +
TSIJ = 751 +
TSIJ = 781
TSIJ = 731 +
TSIJ = 761 +
TSIJ = 791

18
TSIJ = 741 +
TSIJ = 771 +
TSIJ = 801
TSIJ = 2921 +
TSIJ = 2951 +
TSIJ = 2981

19
TSIJ = 2931 +
TSIJ = 2961 +
TSIJ = 2991
TSIJ = 2941 +
TSIJ = 2971 +
TSIJ = 3001

23.01

CHART TITLE - SUBROUTINE PRIO

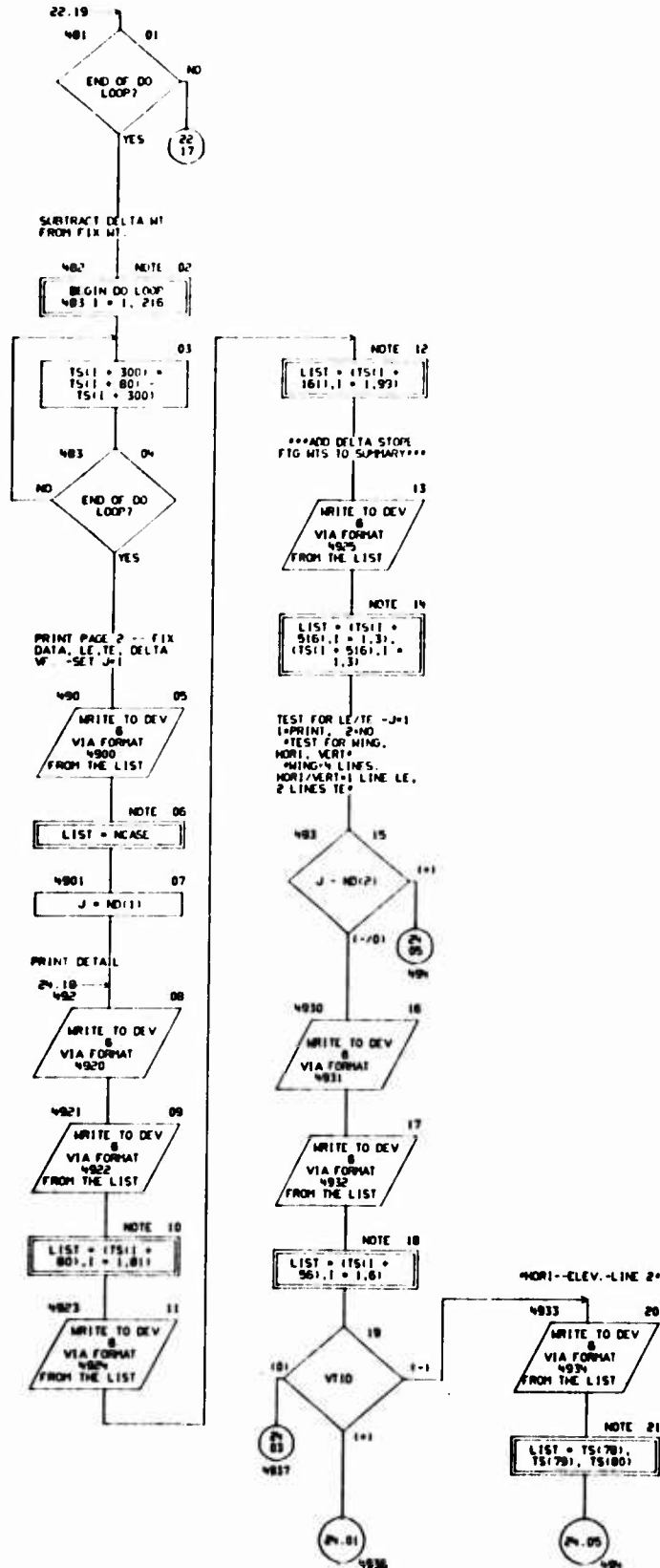


CHART TITLE - SUBROUTINE PRID

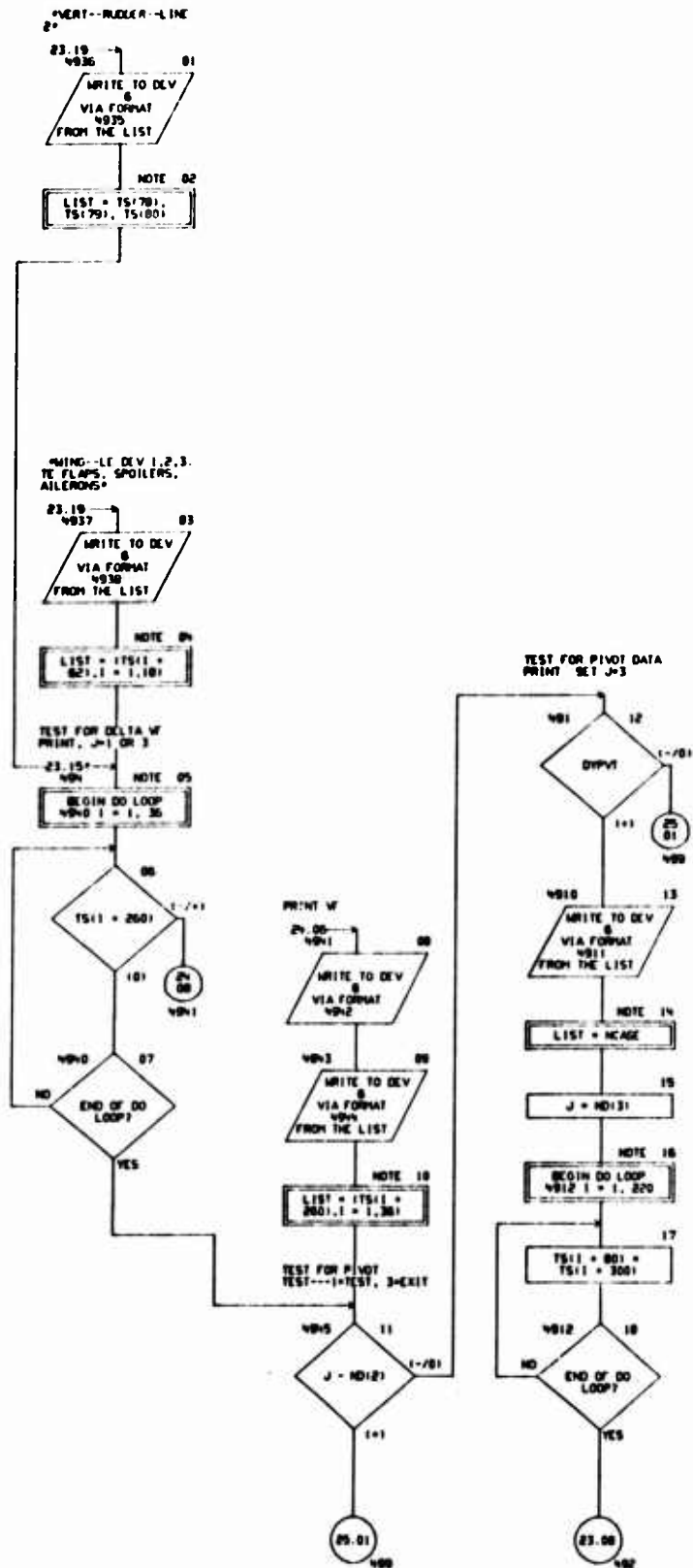


CHART TITLE - SUBROUTINE PRIO

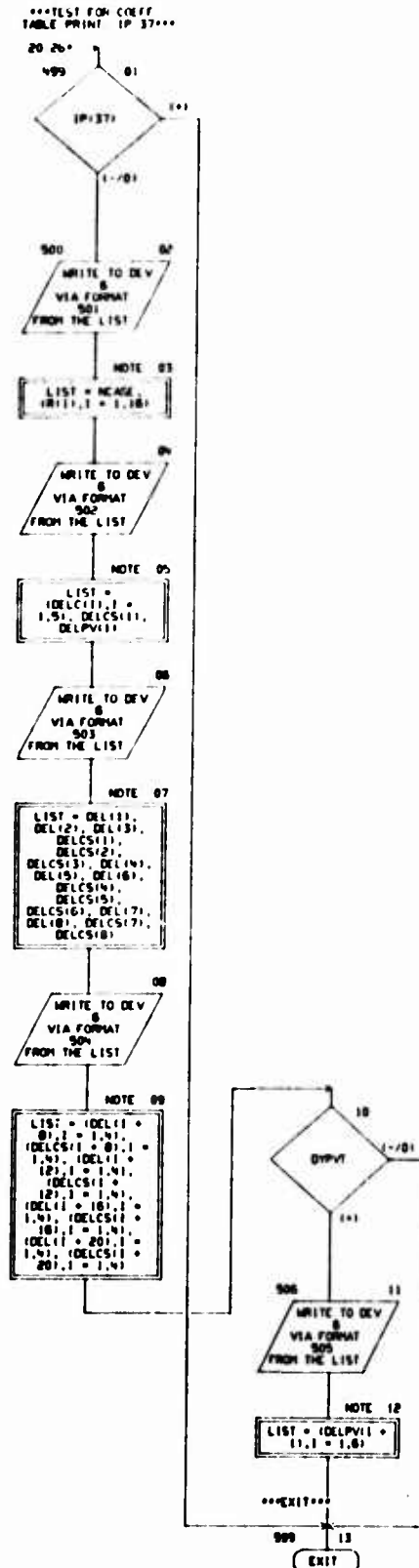


CHART TITLE - NON-PROFESSIONAL STATEMENTS

```

COMMON T(2000),D(2000),CD(2000),ND(100),TW(900)
COMMON /IPRINT/ IP(100)
COMMON /MISC/ NMISC(100)
COMMON /FDAT1/ FUAT(100)
DIMENSION DC(100),TS(50),R(10),
  TOGH(4),DGM(3),MTL(3),
  MEG(26),MTL(10),
  CCM(50),
  DELC(5),DELC(30),DELC(30),DELPV(7)
EQUIVALENCE (DC(1),D(140)),(TS(1),TW(1)),(MEG(1),TW(70)),
  (R(1),NMISC(95)),(DGM(10),T(192)),
  (CM(10),D(146)),
  (VT(10),D(200)),(MTL(1),T(97)),(TOGH(1),D(80)),(DGM(1),D(102)),
  (OPN(2),T(118)),(DGM(2),T(19)),(DFN(2),T(20)),(DGM(2),T(121)),
  (DELM(2),T(107)),(MTL(2),TW(79)),(DELE(2),T(109)),(DELE(2),T(190)),
  (STOT(2),T(125)),(SEXP(2),T(2)),(SPBOX(2),T(24)),(SCSLC(2),T(95)),
  (SPLE(2),T(25)),(SPTE(2),T(26)),(STIP(2),T(17)),(D(197),D(200)),
  (I,ND(27)),(J,ND(28)),(K,ND(29)),(L,ND(30)),(N,ND(31)),
  (INCASE,ND(60)), (IMATL,ND(21))
EQUIVALENCE (DELC(1),T(107)),(DELC(1),TW(87)),(DELC(1),D(140)),
  (CCM(1),CD(1)),
  (DLTBX,T(100)),(DMGLE,T(193)),(DMGLE,T(194)),
  (DELPV(1),D(153))
4100 FORMAT (10H CASE 14,25X,15HHEIGHT SUMMARY,50X,10H** PRID ** )
4101 FORMAT (10H,T(10),10H ***TOTAL WING)
4102 FORMAT (10H,T(14),10H ***TOTAL,T(30),WHTAIL)
4103 FORMAT (10H,T(25),WHTOR)
4104 FORMAT (10H,T(25),WHTVR)
4105 FORMAT (10H,T(25),30HSTIFFENED SAIL/MTL-RIB ***)
4106 FORMAT (10H,T(25),22HPLATE/MTL-SPAR ***)
4114 FORMAT (10H BA10,10H BA10)
413 FORMAT (10H,37X,32H ****TOTAL HEIGHT SUMMARY****/10H,10X,10H*E
  10H*--LB/AV*,5X,20HUNIT HEIGHT--LB/S*,6X,10H*G.--BP*,11X,10H*
  C.G.--FS*,7X,6H*AREA*/100H GM(1) GM(2) GM(3) G
  M(1) GM(2) GM(3) GM(1) GM(2) GM(3) GM(1) GM(2) GM(3) SF/
  AV)
421 FORMAT (12H ***TOTAL***,F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1)
423 FORMAT (12H *O PNL*,F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,F8.1,12H
  *C-SEC*,F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H *PIVOT*,
  F8.1,2X,F7.1,1X,F7.1)
425 FORMAT (10H,T(10),30H** OUTER PANEL COMPONENTS ** )
427 FORMAT (12H /1-BOX/ F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H
  /L.E. / F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H /T.E. / 3
  F8.1,2X,F6.2,1X,F7.1,1X,F7.1,F8.1,12H /1P / F8.1,2X,F6.
  2,1X,F7.1,1X,F7.1,F8.1,12H /MISC / F8.1,2X,F6.2,1X,F7.1,1
  X,F7.1,F8.1,12H /AV.F. / F8.1,12H /WTO / F8.1)
4301 FORMAT (30H0 ***PIVOT SUMMARY*** )
4303 FORMAT (12H DEL-PVT F8.1,12H DEL-BOX F8.1,12H DEL-CS
  F8.1)
441 FORMAT (10H0 ***NOMINAL WING BOX SUMMARY*** )
443 FORMAT (12H *1-BOX* F8.1,2X,F6.2,4X,F8.1,12H *C-SEC* F8.
  1,2X,F6.2,4X,F8.1,12H **V.F.* F8.1)
452 FORMAT (31H0 ***DESIGN DATA*** )
456 FORMAT (10H PIVOT/MISC F11.1,5X,F11.1,10H MTL(10)/MT(10
  0)F11.1,5X,F11.1,10H ND(10)/ND(10)F11.1,5X,F11.1,10H
  PI(10)/PI(10) F11.3,5X,F11.3,10H Y-BP/M-ST(10)F11.3,5X,F1
  1.3,10H Y-BP/M-ST(10)F11.3,5X,F11.3,10H MOM(10)/FBR(10)
  F11.3,5X,F11.3)
458 FORMAT (10H TOGH(1)+F8.1,10H TOGH(2)+F8.1,10H TOGH(3)+F8.1,10H *H2=
  F8.3,10H *H2G=F8.3,10H FL(10)+F8.1,10H MATL ND=13/10H DGM(1)+F
  8.1,10H DGM(2)+F8.1,10H DGM(3)+F8.1,10H *H2=F8.3,10H *H2G=F8.3,10H
  FL(10)+F8.1,10H YCP=F7.1)
4800 FORMAT (10H CASE 14,10X,43H ***NOMINAL TORQUE-BOX DETAIL ME10

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CHART TITLE - NON-PROCEDURAL STATEMENTS

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NTS-***,15X,15H** PRIO - (P137) ***
4920 FORMAT (1H 2X,22H **TOTAL SURFACE** ,10X,20H **OUTER PANEL**
- ,7X,22H **CENTER-SECTION** ,/1H 22X,04HGM1) GM12) GM
3) GM1) GM2) GM3) GM1) GM2) GM3)
4922 FORMAT (10H **TORQUE-BOX** ,F10.1,3X,F9.1,2X,F9.1,10H **UP
PER COVER** ,F10.1,3X,F9.1,2X,F9.1,10H **SKINS** ,F10
1,3X,F9.1,2X,F9.1,10H **STRG** ,F10.1,3X,F9.1,2X,F9.
1,10H **MISC. SK** ,F10.1,3X,F9.1,2X,F9.1,10H **LOWER CO
VER** ,F10.1,3X,F9.1,2X,F9.1,10H **SKINS** ,F10.1,3X,F
9.1,2X,F9.1,10H **STRG** ,F10.1,3X,F9.1,2X,F9.1,10H
**MISC. SK** ,F10.1,3X,F9.1,2X,F9.1)
4924 FORMAT (10H **RIBS** ,F10.1,3X,F9.1,2X,F9.1,10H **
INTERM** ,F10.1,3X,F9.1,2X,F9.1,10H **BULKHEADS** ,F10.1
,3X,F9.1,2X,F9.1,10H **RT/C-L** ,F10.1,3X,F9.1,2X,F9.1
,10H **FRONT SPAR** ,F10.1,3X,F9.1,2X,F9.1,10H **CAPS
** ,F10.1,3X,F9.1,2X,F9.1,10H **MED** ,F10.1,3X,F
9.1,2X,F9.1,10H **REAR SPAR** ,F10.1,3X,F9.1,2X,F9.1,10H
**CAPS** ,F10.1,3X,F9.1,2X,F9.1,10H **MED** ,
F10.1,3X,F9.1,2X,F9.1,10H **MISC. ATT.** ,F10.1,3X,F9.1,2X
,F9.1)
4925 FORMAT (10H **STORE FTG.** ,F10.1,3X,F9.1)
4931 FORMAT (10H40H
***LEADING EDGE***
***TRAILING EDGE*** )
4932 FORMAT (10H **FIXED STR** ,F10.1,20X,12H**FIXED STR** ,F9.1)
4934 FORMAT (1H 67X,12H**ELEVATORS** ,F9.1)
4935 FORMAT (1H 67X,12H**RUDDERS** ,F9.1)
4938 FORMAT (10H **DEV. NO. 1** ,F10.1,20X,12H**E FLAPS** ,F9.1,6X
,12H**DEV. NO. 2** ,F10.1,20X,12H**SPOILERS** ,F9.1,6X,12H**DEV. NO.
3** ,F10.1,20X,12H**AILERONS** ,F9.1)
4942 FORMAT (10H
***FLUTTER STIFF
MESS SUMMARY--OUTER-PANEL**-/10H
UP
PER COVER
LOWER COVER
RIBS, SPARS
, ATT. )
4944 FORMAT (10H COV-U /-L-/1.R.,F10.1,3X,F9.1,2X,F9.1,10H SK-U
-/L-/R.S.,F10.1,3X,F9.1,2X,F9.1,10H STR-U/-L-/R.S.,F10.1
,3X,F9.1,2X,F9.1,10H M.SK.-U/-L-/M.A.,F10.1,3X,F9.1,2X,F9.1)
4911 FORMAT (10H1 CASE14,F10,94H ***DETAIL HEIGHTS--WING BOX LESS
PIVOT STRUCT.-----,15X,15H** PRIO - (P137) ***
501 FORMAT (10H CASE14,10X,20H****,EFFICIENT SUMMARY****,
35X,15H** PRIO - (P137) ****/1H ,BA10/1H ,BA10/1
502 FORMAT (10H 1000,F10.4)
503 FORMAT (10H 2010,F10.4,10X,10H 3010,F10.4,10H 2020,F1
0.4,10X,10H 3020,F10.4,10H 2030,F10.4,20X,10H 3030,
F10.4)
504 FORMAT (10H 2110,F10.4,10H 3110,F10.4,10H 2210,F10.4,
10H 3210,F10.4,10H 2310,F10.4,10H 3310,F10.4,10H
2410,F10.4,10H 3410,F10.4)
505 FORMAT (10H 4010,F10.4,10H 4020,F10.4,10H 4030,F10.4)

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CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE TBM*****

FUEL/TORQUE BOX WEIGHT INTEGRATION

CHART TITLE - SUBROUTINE TBFMI

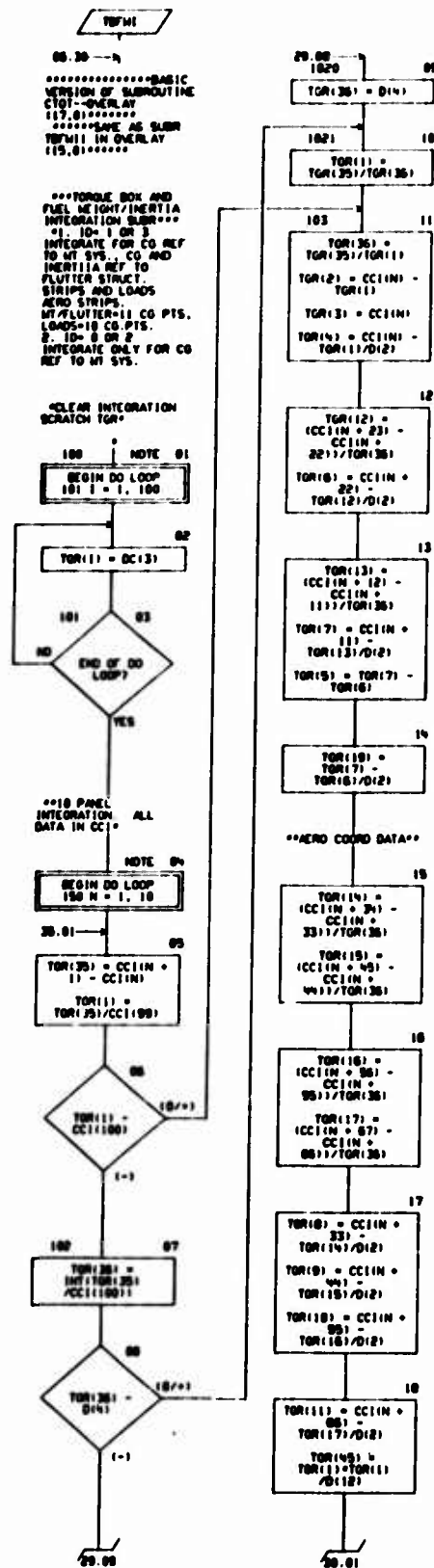


CHART TITLE - SUBROUTINE TORMI

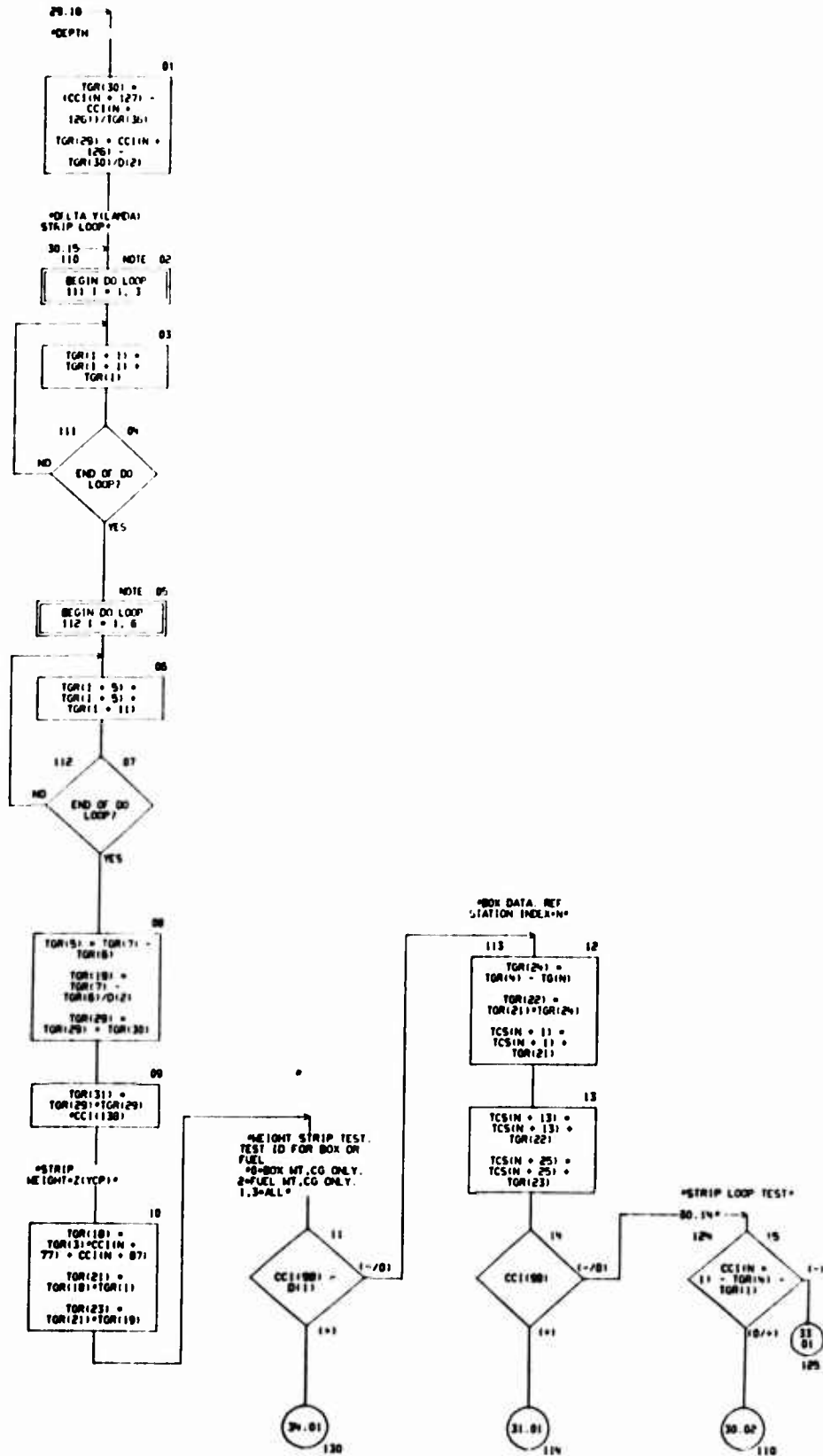
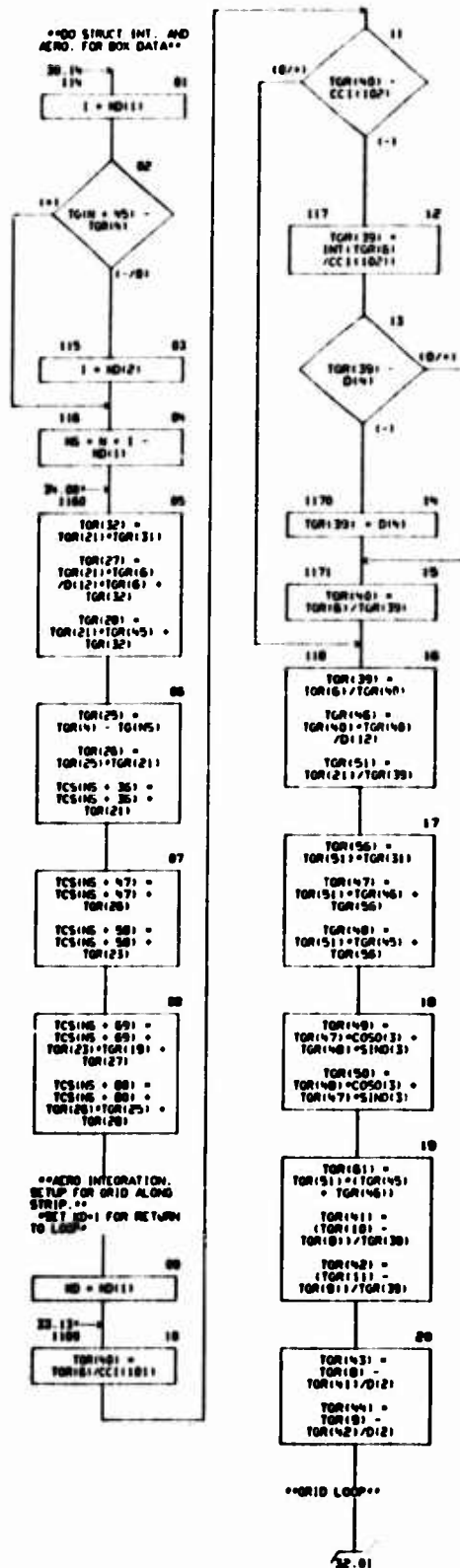


CHART TITLE - SUBROUTINE TORW

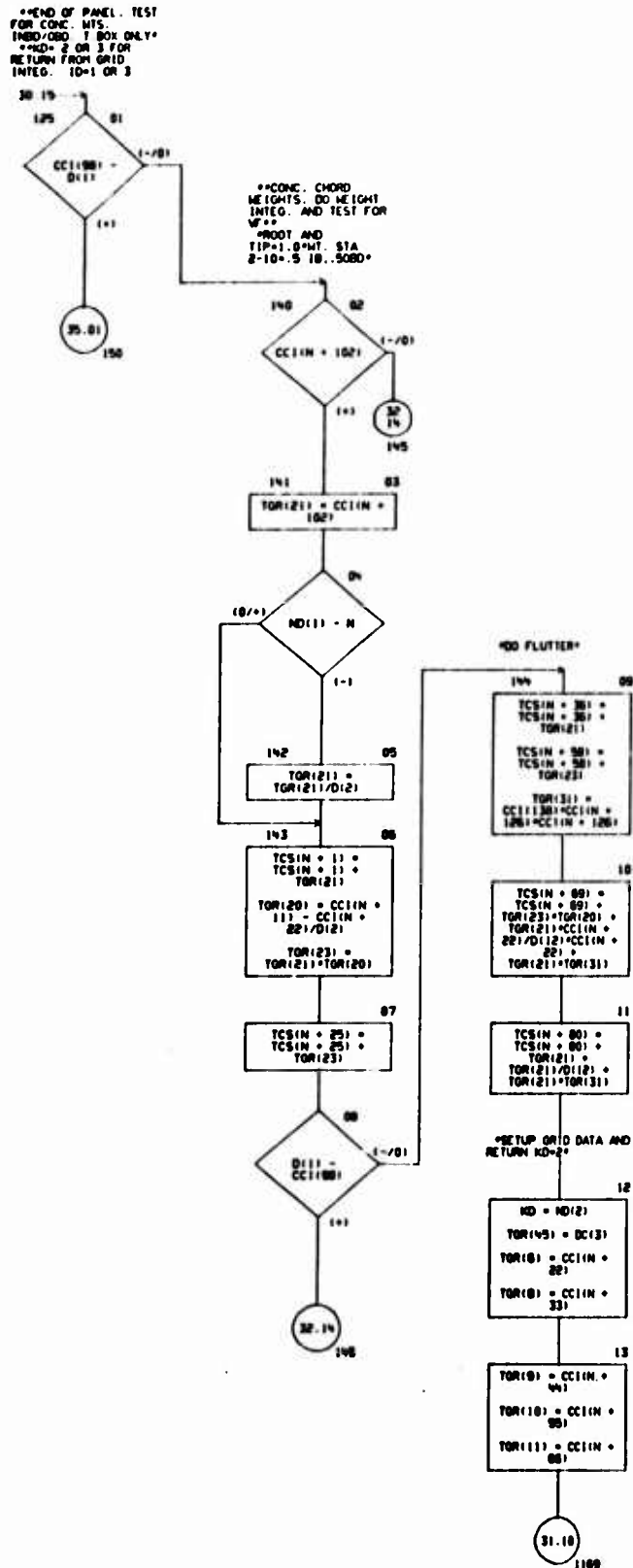


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graph TD
    110[110] --> 111[111]
    111 --> 112[112]
    112 --> 113[113]
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```

CHART TITLE - SUBROUTINE TORMI



•DO FLUTTER•



```

graph TD
    Start(( )) --> 32.13
    32.13 --> 150{END OF DO LOOP?}
    150 -- YES --> 29.29
    150 -- NO --> 32.14
    32.14 --> 151{CC(180) - D(11)}
    151 -- 1 --> 35.30
    151 -- 1 --> 170
    170 --> 152{NOTE 83}
    152 --> 153{BEGIN DO LOOP  
180 I = 1, 7}
    153 --> 35.29
    35.29 --> 154{CC(11) + 185}
    154 -- 181 --> 155{180}
    154 -- 1 --> 35.29
    155 --> 156{N = N + D(11)}
    156 --> 157{CC(11) + 209 - TGR(1)}
    157 -- 1 --> 158{180}
    157 -- 1 --> 159{N = N + D(11)}
    158 --> 160{180}
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    3
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CHART TITLE - SUBROUTINE TBMH

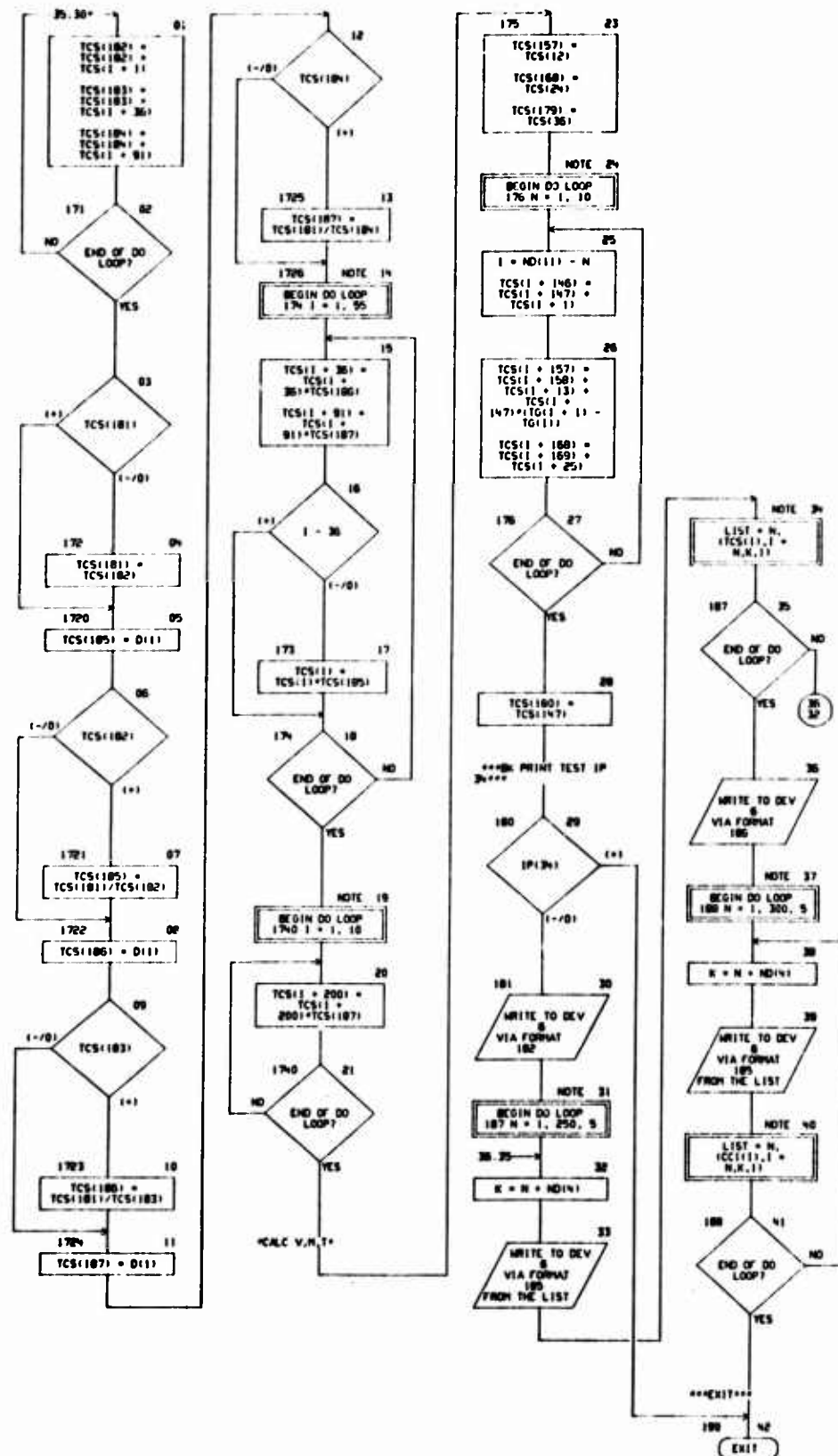


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
TG(300),TWG(400),YC(160),TF(24),TST(50),TGR(100),
CC(300),TCS(250),TGA(135),
SIND(6),COS(6)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TG(1),T(1001)),(TWG(1),T(1301)),(TST(1),T(1701)),
(TGR(1),T(1751)),(YC(1),T(351)),(TF(1),T(4111)),(TGA(1),T(1851)),
(CD(11),CD(1851)),(TCS(1),CD(1401)),
(SIND(1),T(1401)),(COS(1),T(1461)),
(I,ND(26)),(N,ND(27)),(L,ND(28)),(K,ND(29)),(NS,ND(30)),
(MA,ND(31)),(KD,ND(32))
182  FORMAT (77H)  ***TBFH SUBR: FUEL/BOX STRUCT. INTEGRATION DATA A
      -TCS AND CC1 ARRAYS***,13X,20H** TBFH - (P(34) **/640 TCS )
185  FORMAT (11H 14,5E18 8)
186  FORMAT (640 CC1 )

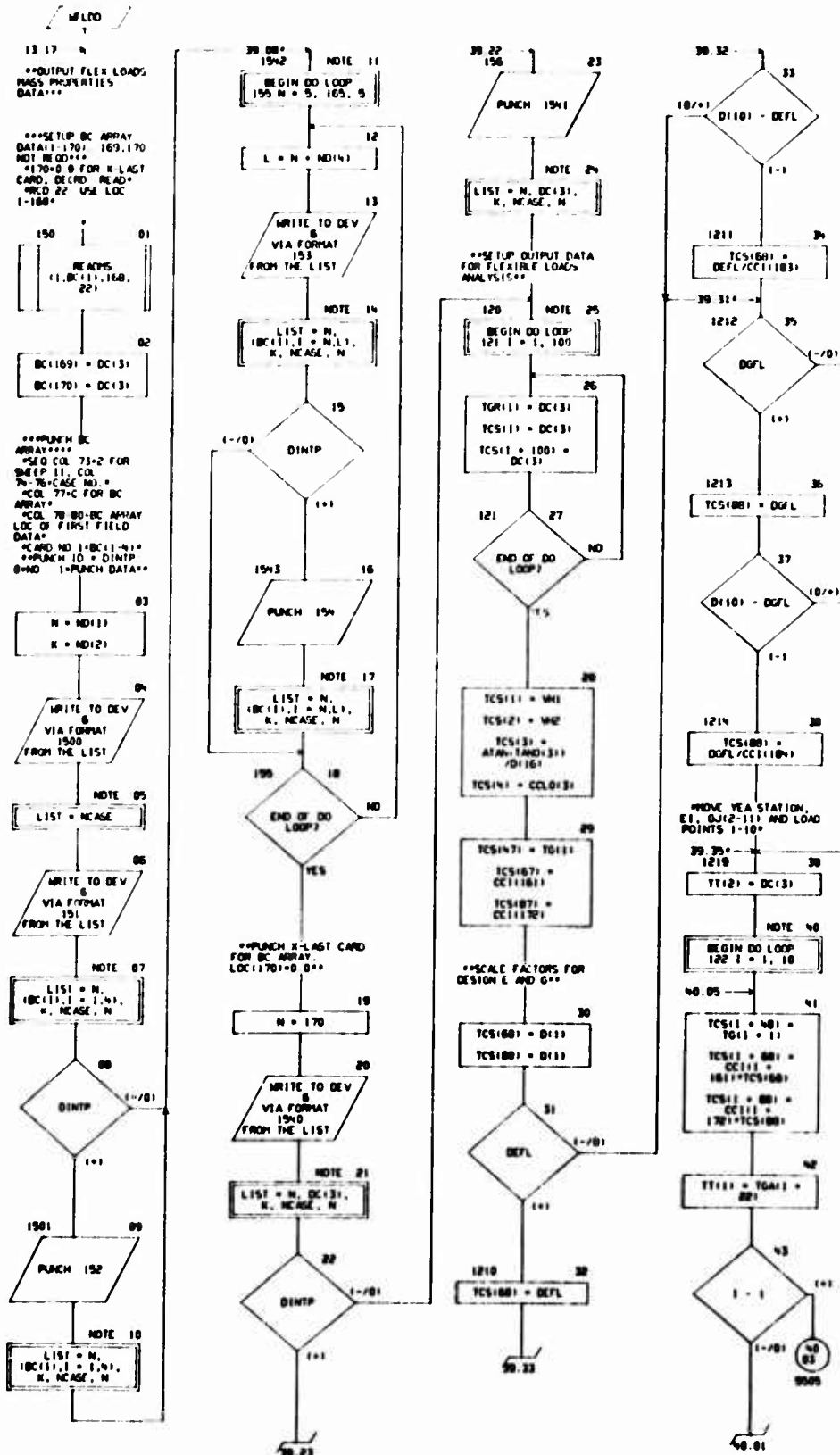
```

CHART TITLE INTERVIEW COMMENTS

*****SUBROUTINE WLD*****

*****PASS/EN SIGN DATA CALC OUTPUT FOR FILE LOGIC ED *****

CHART TITLE - SUBROUTINE WFLDO



1549

CHART TITLE - SUBROUTINE MFL00

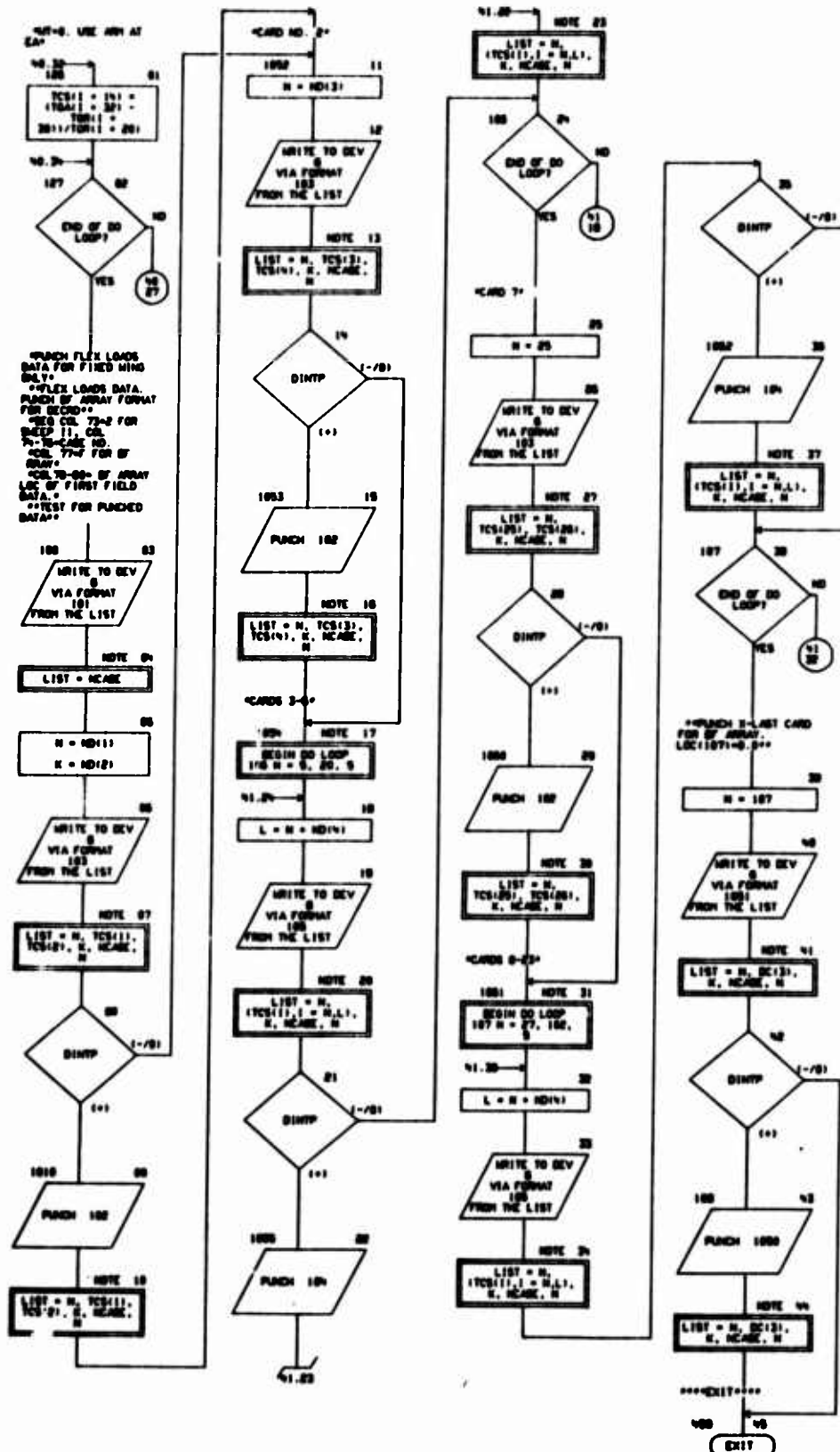


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON /PRINT/IP(80)
COMMON T
DIMENSION T(1620),D(2060),CD(2000),ND(100),DC(100),
VC(150),VTC(100),TG(300),TMG(400),TGA(135),CC(1300),TCS(250),
CLE(1150),CTE(1150),CFL2(1150),CFL1(1150),CHI(1150),
CCDL(1150),TST(50),TGR(100),CTB(150),
TAND(8),CCLO(8),SIND(8),COSO(6),
DFXF(2),DFXC(2),
BC(170),
TT(24)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TT(1),T(4111)),(VC(1),T(1201)),(VTC(1),T(1351)),
(B1502,T(1161)),
(TG(1),T(1001)),(TMG(1),T(1301)),(TGA(1),T(1051)),
(TST(1),T(1701)),(TGR(1),T(1751)),(CTB(1),CD(1351)),
(CLE(1),CD(1651)),(CTE(1),CD(1801)),(CFL1(1),CD(1951)),
(CFL2(1),CD(1101)),(CHI(1),CD(1251)),(CCDL(1),CD(1501)),
(CCC(1),CD(1651)),(TCS(1),CD(1401)),(BC(1),CD(1401)),
(IN,ND(130)),(I,ND(128)),(IK,ND(131)),(IL,ND(128)),(INEASE,ND(160))
EQUIVALENCE (TAND(1),T(1221)),(CCLO(1),T(1311)),(SIND(1),T(1401)),
(COSO(1),T(1461)),
(VM1,D(1290)),(VM2,D(1291)),
(DEF1,D(1292)),(DOFL,D(1293)),
(DINTP,D(1290)),
(DFXF(1),D(1271)),(DFXC(1),D(1274))
1500 FORMAT (12H) CASE NO.13,95H ***FLEXIBLE LOADS GENERAL DATA
      BC ARRAY DATA***,29X,11H** MFLD0 **/
151  FORMAT (3X,13,4E16.8,10X,11,13,1HC,13)
152  FORMAT (9X,13,4E12.5,12X,11,13,1HC,13)
153  FORMAT (3X,13,5E16.8,2X,11,13,1HC,13)
154  FORMAT (9X,13,5E12.5,11,13,1HC,13)
1540 FORMAT (2H -,1X,13,E16.8,66X,11,13,1HC,13)
1541 FORMAT (1H ,8X,13,E12.5,40X,11,13,1HC,13)
9503 FORMAT(1H1,70X,39H** CTOT (CALLED FROM MFLD0) - (P135) **)
101  FORMAT (12H) CASE NO.13,95H ***FLEXIBLE LOADS INERTIA DATA
      IF ARRAY DATA***,29X,11H** MFLD0 **/
102  FORMAT (9X,13,2F12.5,36X,11,13,1HF,13)
103  FORMAT (3X,13,2F16.5,50X,11,13,1HF,13)
104  FORMAT (9X,13,5E12.5,11,13,1HF,13)
105  FORMAT (3X,13,5E16.8,2X,11,13,1HF,13)
1050 FORMAT (1H-,8X,13,E12.5,40X,11,13,1HF,13)
1051 FORMAT (2H -,1X,13,E16.8,66X,11,13,1HF,13)

```

CHART TITLE - INTRODUCTORY COMMENTS

```
*****  
*****SUBROUTINE MWTD*****  
**PASS/DESIGN DATA EVALUATION FOR FLUTTER OPT. PROGRAM**  
*****
```


CHART TITLE - SUBROUTINE MWDO

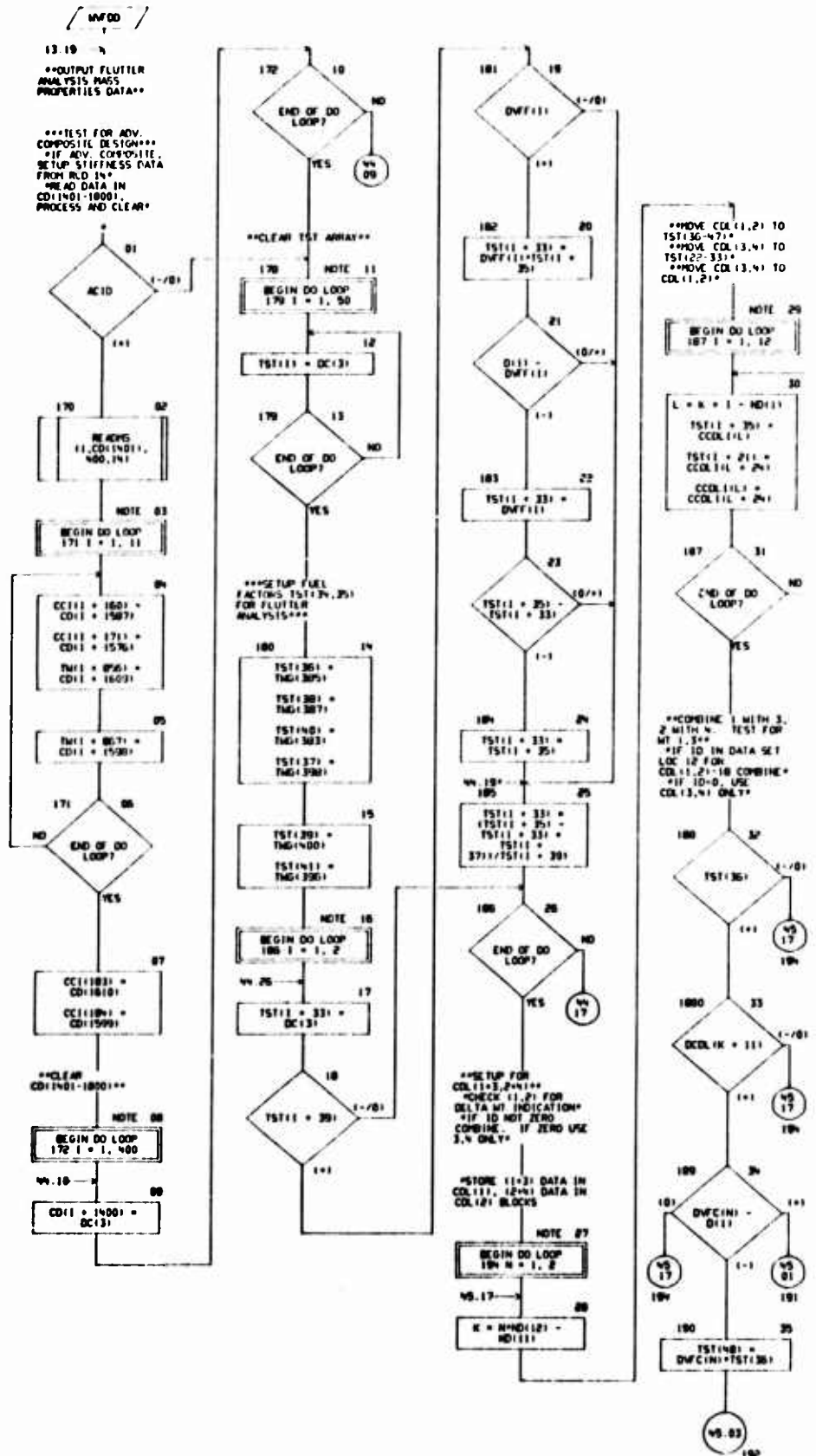


CHART TITLE - SUBROUTINE MWDO

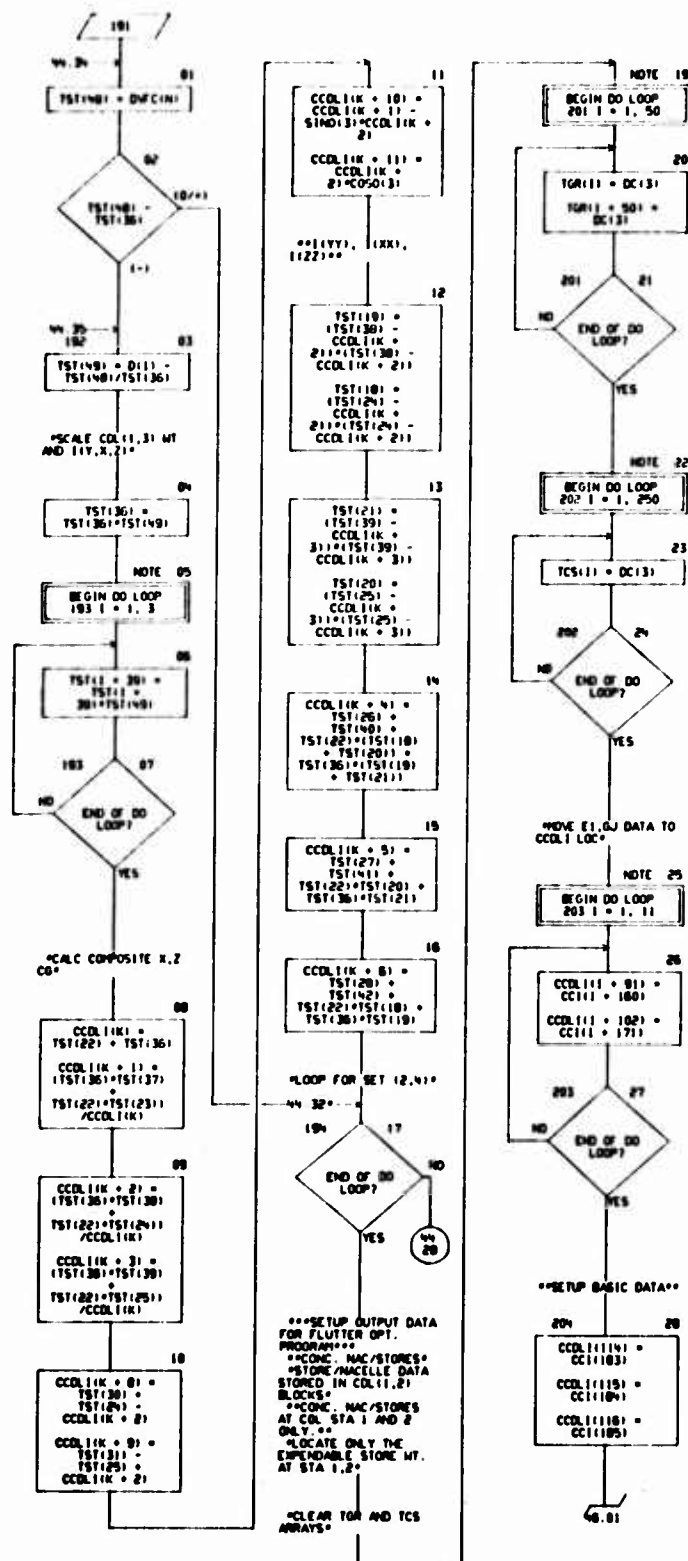


CHART TITLE - SUBROUTINE WYDO

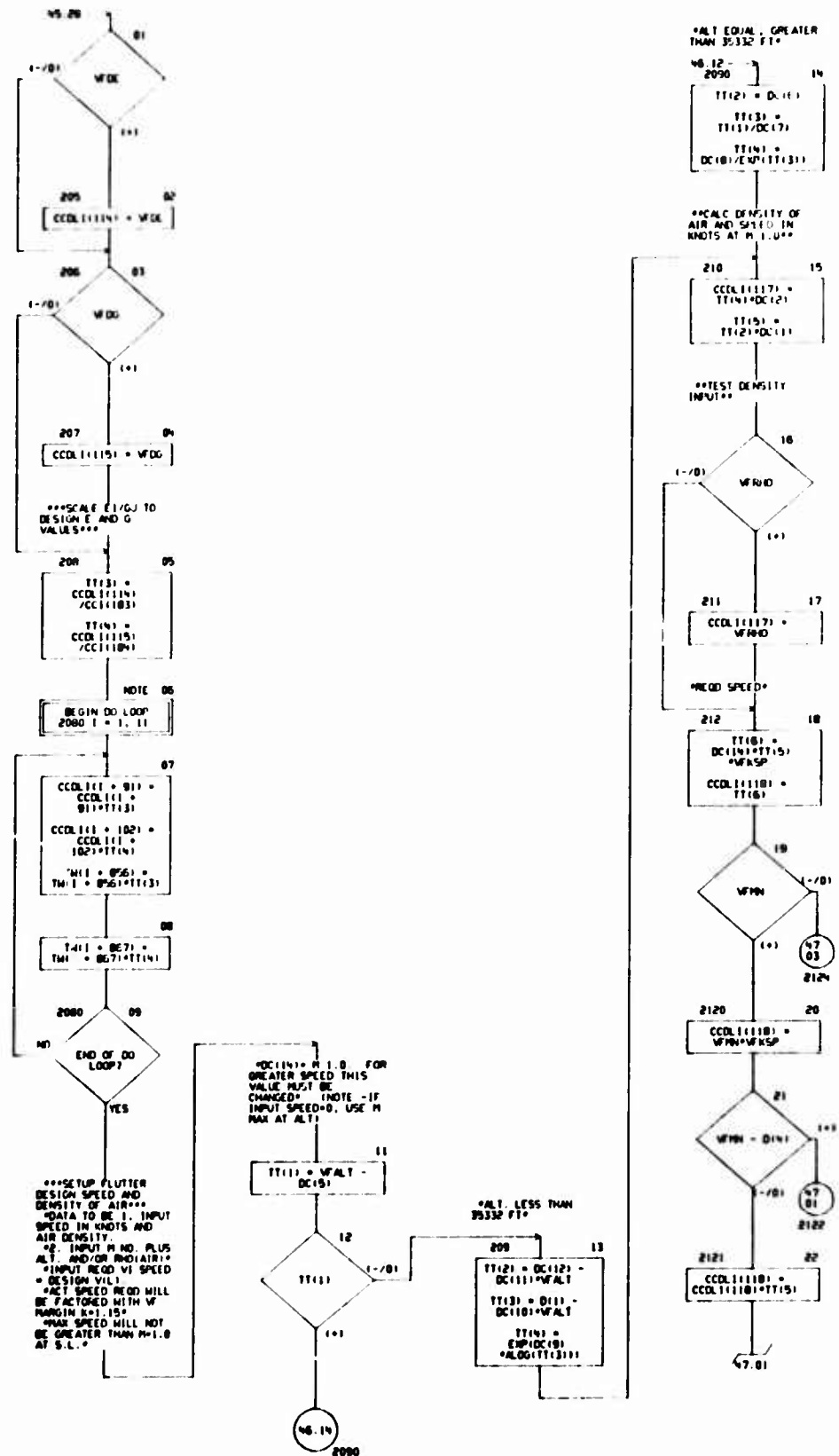


CHART TITLE - SUBROUTINE WFFDO

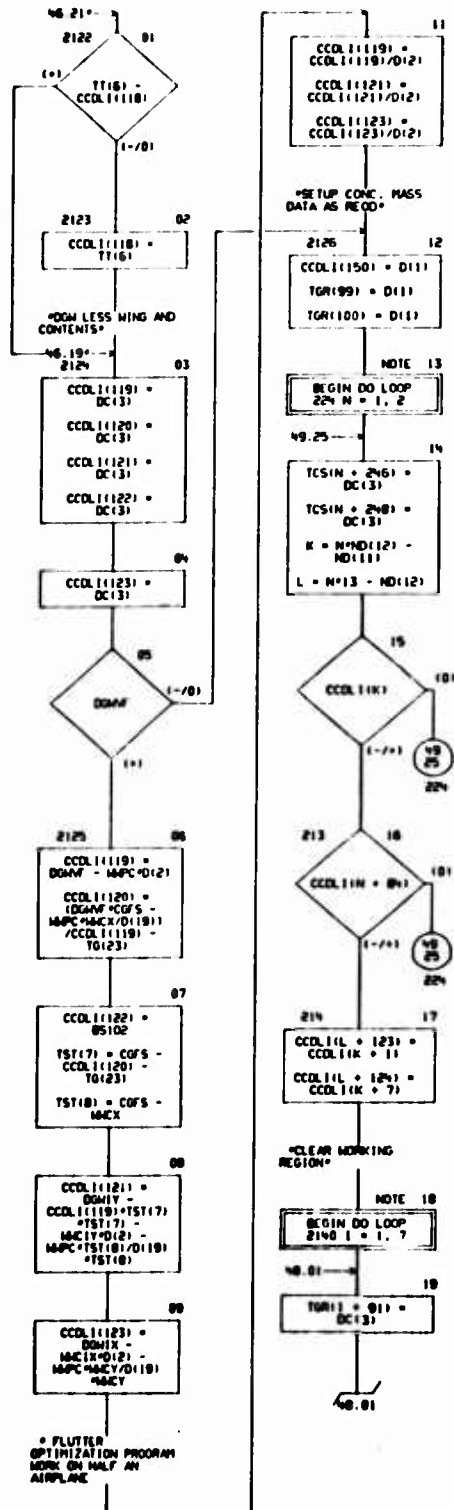


CHART TITLE - SUBROUTINE WFOO

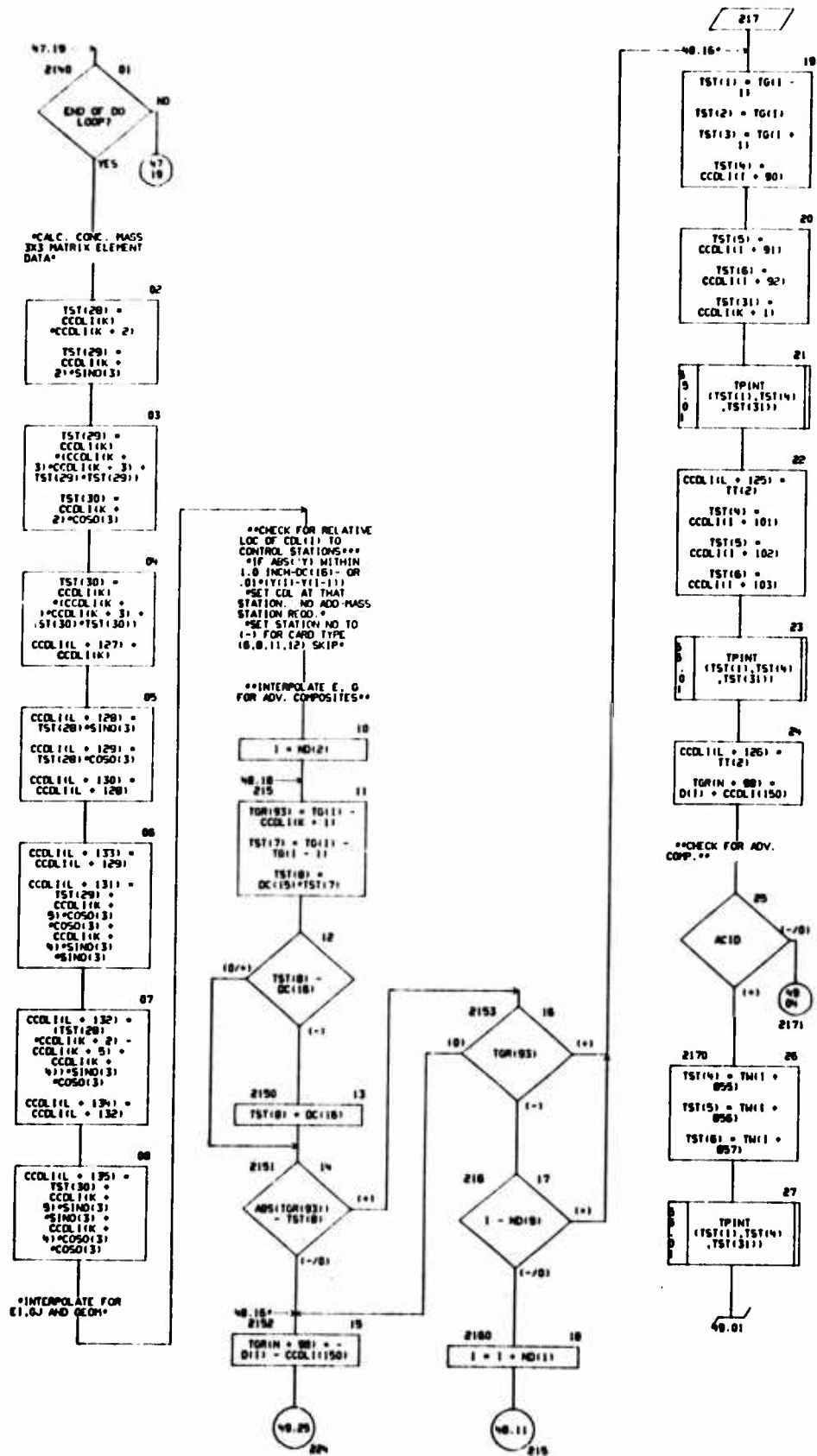
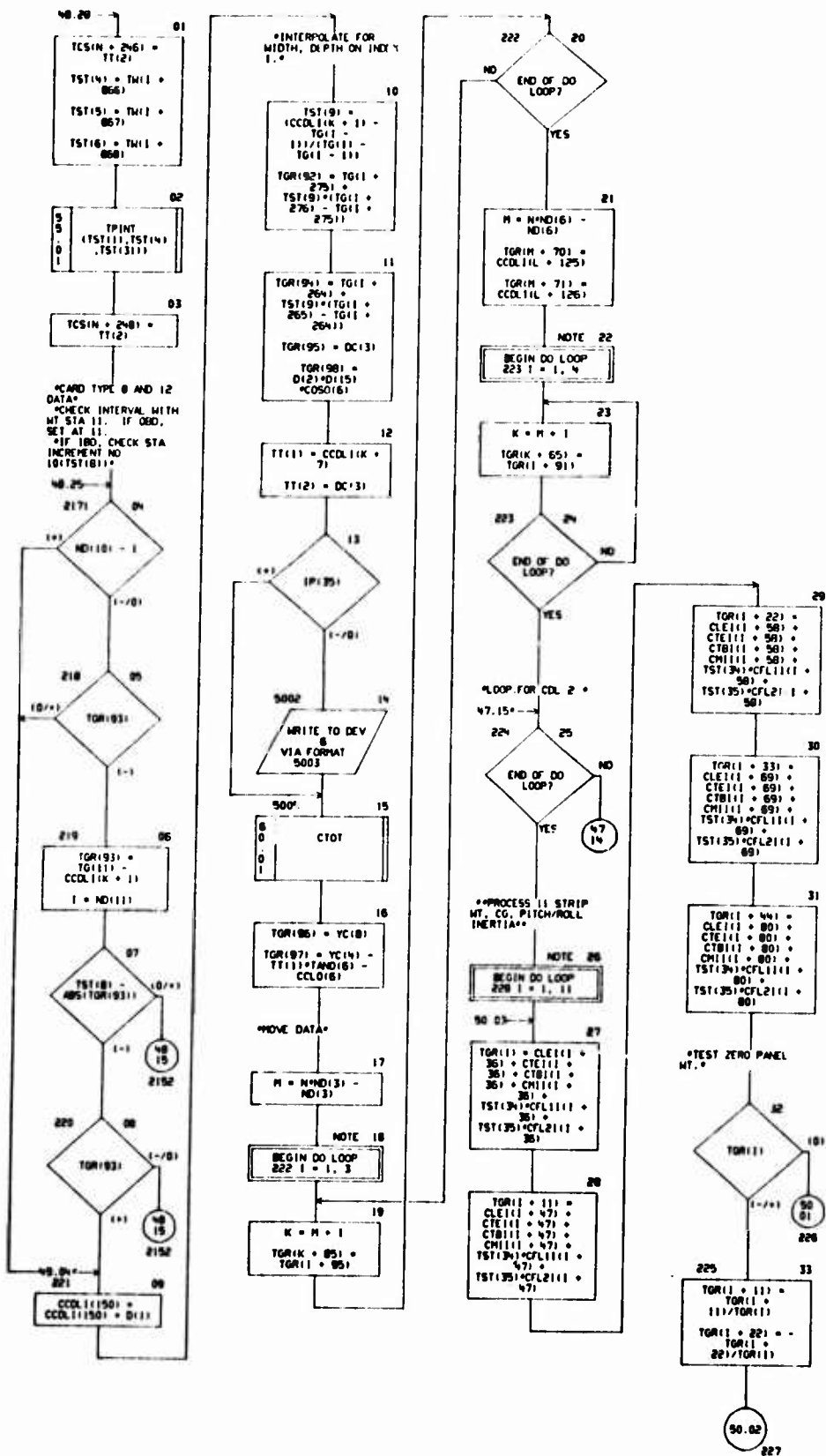


CHART TITLE - SUBROUTINE INFO



```

      01
      TGR11 = 111 *
      DC131
      TGR11 = 221 *
      DC131
      **ITYPE1 PITCH ABOUT
      CO**
      02
      TGR11 = 331 *
      TGR11 = 331 *
      TGR111TGR11 =
      221TGR11 = 221
      03
      END OF DO
      LOOP?
      YES
      47
      NO
      **PROCESS STRIP AND
      CONC. MASS DATA FOR
      OUTPUT**
      **ADJUST CONTROL
      STATIONS AS REQ'D FOR
      CONC. MASS**
      *M = MT ANALYSIS
      *L = CONTROL STATION
      INDEX. K1 MAX1 = 11 +
      2 = 13
      *L1 = CONC. MASS (11)
      10 1-TEST,
      2-PROCESS DO
      *L2 = CONC. MASS (21)
      10 1-TEST,
      2-PROCESS DO
      *CONTROL STATION (0)
      CARD TYPE 0 ONE**
      **CC111-301 = E.G
      DATA FOR CARD TYPE
      0**
      04
      TCS(66) = TG(277)
      TCS(67) = D(11)
      TCS(68) = TG(266)
      TCS(69) = DC131
      05
      TCS(70) =
      CCCL(192)
      TCS(71) =
      CCCL(1103)
      06
      CC(11) = TH(857)
      CC(116) = TH(868)
      *CONTROL STATION = MT
      STATION
      *CONTROL STATION = MT
      STATION + 1.0 INCH*
      *INITIALIZE BOUNDARY
      ID AT STATION 1. CARD
      TYPE 11 DATA*
      07
      TCS(156) = D(11)
      TCS(157) = D(11)
      TCS(158) = D(21)
      TCS(159) = D(13)
  
```

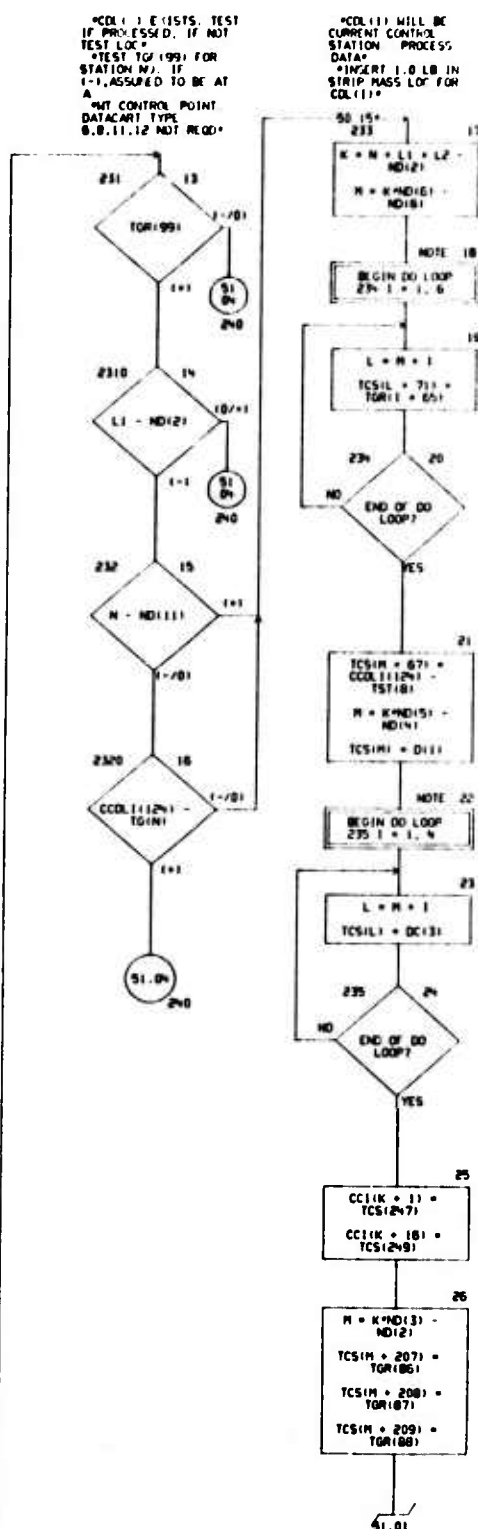
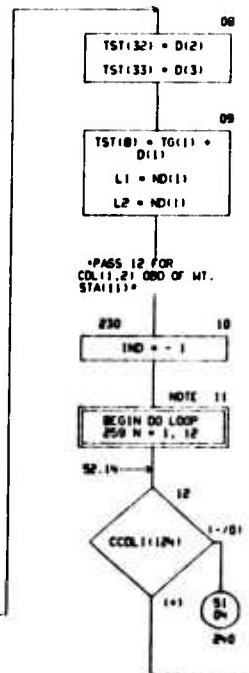


CHART TITLE - SUBROUTINE WING DO

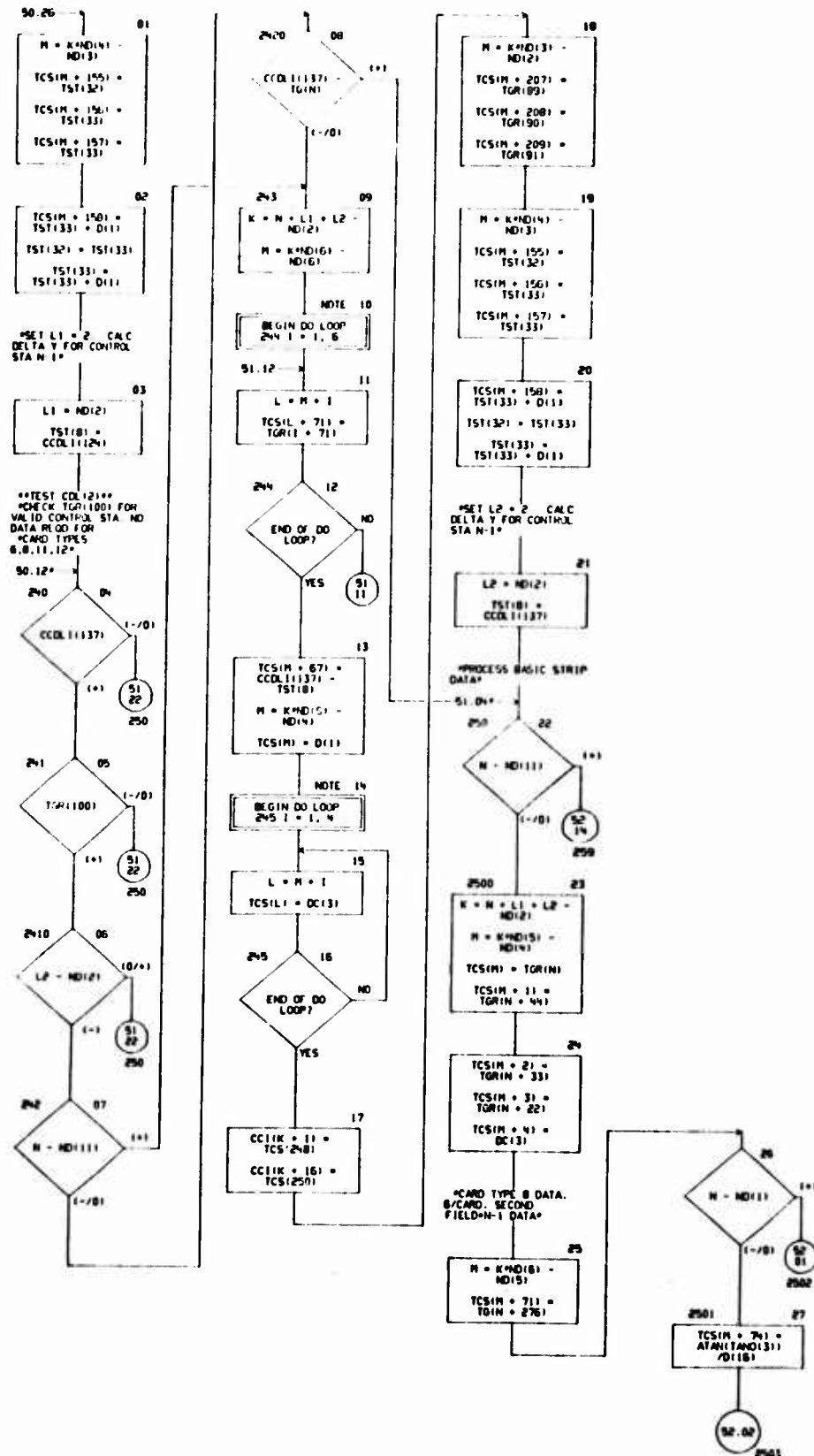


CHART TITLE - SUBROUTINE INFO

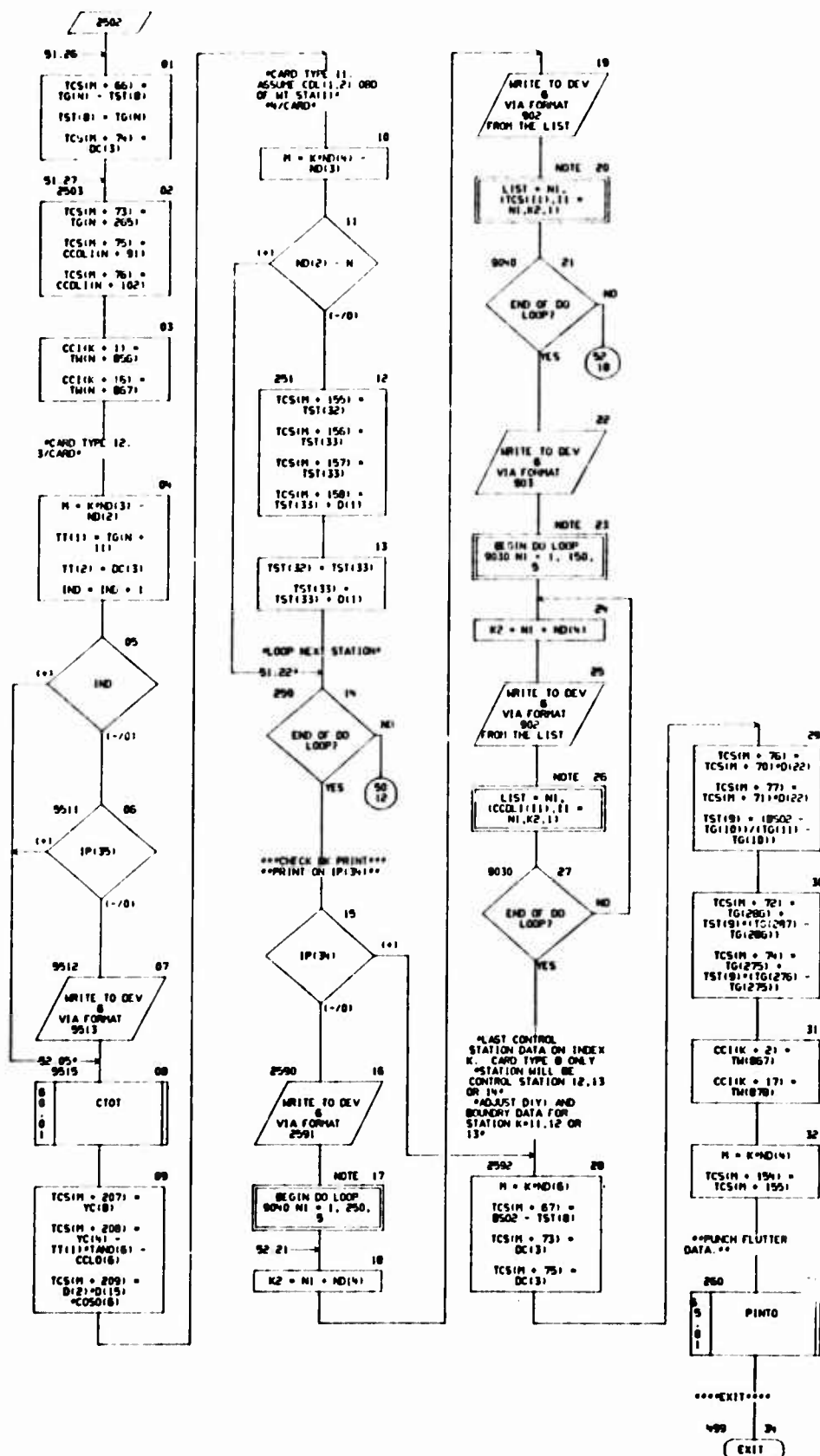


CHART TITLE - MAIN PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ IP(80)
DIMENSION T(1201,D(2060),CD(2000),ND(100),DC(100),TW(900),
VC(150),VTC(60),TG(300),TWG(400),CC(1300),TCS(250),
CLE(1150),CTE(1150),CFL(11150),CFL2(1150),CMT(1150),
CCCL(1150),TST(50),TGR(100),CTB(1150),
TAND(9),CCLO(9),SINO(6),COSO(6),
DWF(2),DWC(2),
DCDL(100),
TT(24)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(DC(1),D(1401)),(TT(1),T(4111)),(VC(1),T(2011)),(VTC(1),T(3511)),
(TG(2),T(811)),(TW(1),T(6221)),(TST(2),T(151)),
(TG(1),T(1001)),(TWG(1),T(1301)),
(TST(1),T(1701)),(TGR(1),T(1751)),(CTB(1),CD(3511)),
(CLE(1),CD(6511)),(CTE(1),CD(8011)),(CFL(1),CD(9511)),
(CFL2(1),CD(1101)),(CMT(1),CD(1251)),(CCCL(1),CD(1501)),
(CCC(1),CD(1651)),(TCS(1),CD(1401)),
(IAC(1),D(1430)),
(IN,ND(301)),(I,ND(291)),(K,ND(311)),(L,ND(281)),(M,ND(271))
EQUIVALENCE (TAND(1),T(1221)),(CCLO(1),T(1311)),(SINO(1),T(1401)),
(COSO(1),T(1461)),(TWKSP,D(3091)),
(DGMF,D(2951)),(CCFS,D(2961)),(DGMFY,D(1771)),(DGMFX,D(2981)),
(IMPC,D(2991)),(IMCY,D(3001)),(IMCX,D(3011)),
(IMCXY,D(3021)),(IMCIX,D(3031)),(IMFY,D(3041)),
(WFAL,T,D(3051)),(WFRH,D(3061)),(WFDC,D(3071)),(WFDG,D(3081)),
(DWFF(1),D(2761)),(DWC(1),D(2781)),(DCDL(1),D(18551))
9003 FORMAT(1H,70X,39H** CTOT (CALLED FROM MWDO) - IP(35) **)
9513 FORMAT(1H,59X,50H** CTOT (CALLED FROM MWDO - LOOP 299) - IP(35)
**)
2991 FORMAT(1H,5X,78H***DATA GENERATION SUBR FOR FLUTTER OPTIMIZATION
PROGRAM--FINAL DATA ARRAYS***,6X,20H** MWDO - IP(34) **/END TCS )
902 FORMAT (1H,14,5L18.0)
903 FORMAT (8H0CCDL)

```

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE TPINT*****

PARABOLIC CURVE FIT AND EVALUATION

TPINT

*YI=ABSCISSAS,
X1=ORDINATES.
Y0=EVALUATION PT. *
*X0 LOCATED IN
T1:21*

```

**MOVE DATA**
**NORMALIZE R(1)00

```

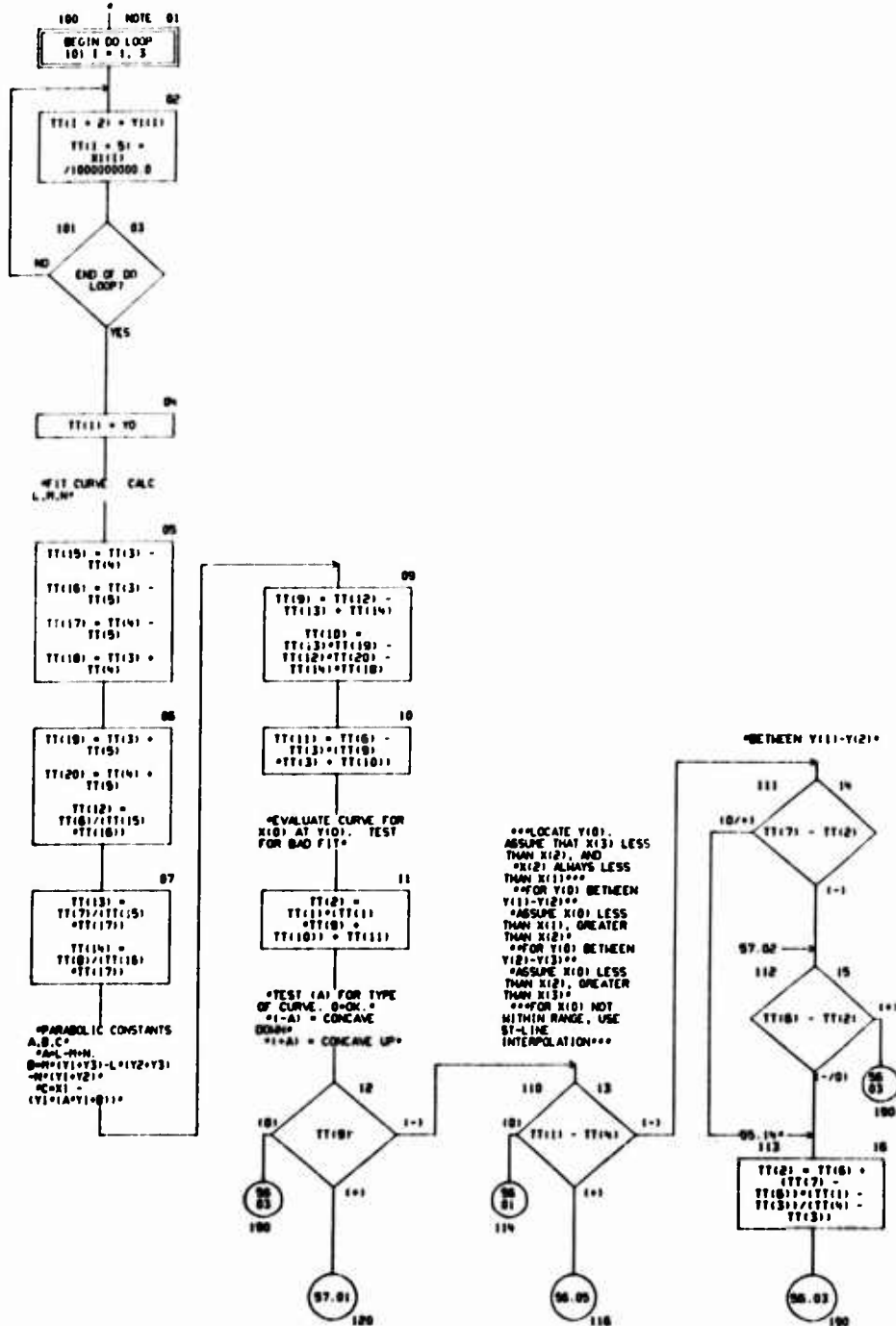


CHART TITLE - SUBROUTINE TPINT(Y1,X1,Y0)

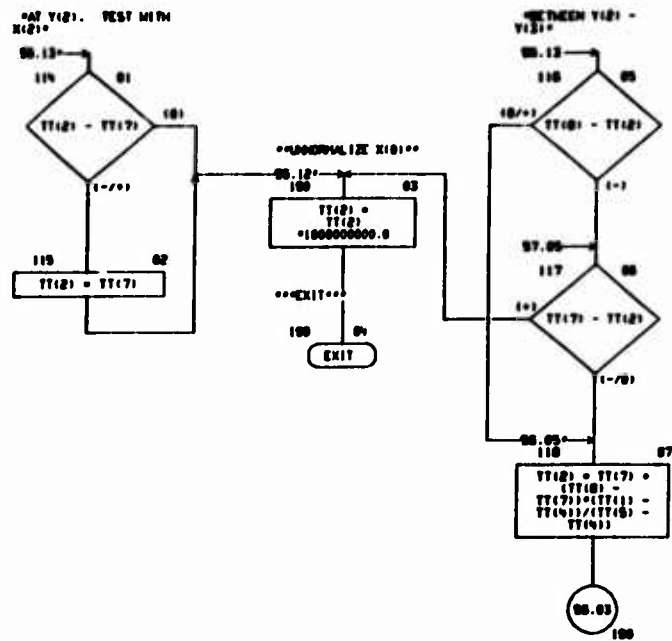


CHART TITLE - SUBROUTINE TPINT(Y1,X1,Y0)

***CONCAVE DOWN.
 X(2) MAY BE LESS OR
 GREATER THAN X(1)***
 ***IF GREATER, X(3)
 MAY BE LESS OR
 GREATER THAN X(2)***
 **TEST FOR RELATIVE
 VALUE OF X(2), X(3)
 AND LOCATE Y(0)**
 **FOR Y(0) BETWEEN
 Y(1)-Y(2)**
 **ASSUME VALUE OF
 X(0) BETWEEN
 X(1)-X(2)**
 **SAVE FOR Y(0)
 BETWEEN Y(2) AND
 Y(3)**

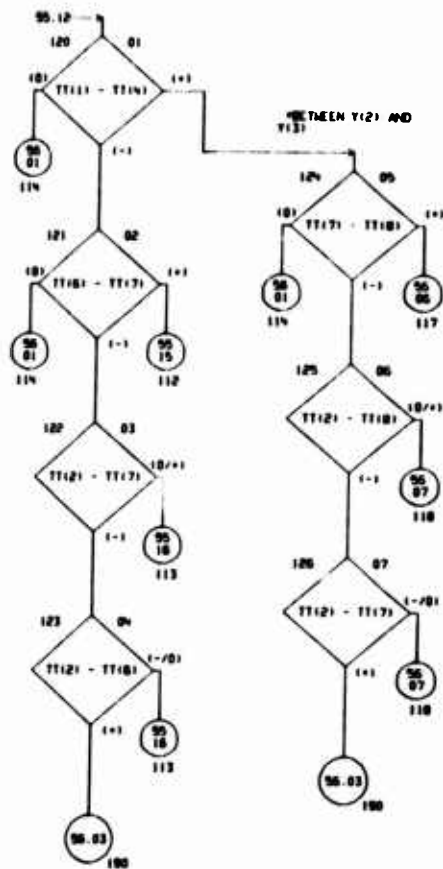


CHART TITLE - NON-PROCEDURAL STATEMENTS

COMMON T

DIMENSION T(16220),D(2060),CD(2000),ND(100),DC(100),
TT(20),

Y(13),X(13)

EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),

(DC(1),D(1401)),(TT(1),T(4111)),

(1,ND(321))

06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 50

CHART TITLE - INTRODUCTORY COMMENTS

.....

*****SUBROUTINE CTOT*****

PLATFORM CHORD EVALUATION

.....

CHART TITLE - SUBROUTINE CTOT

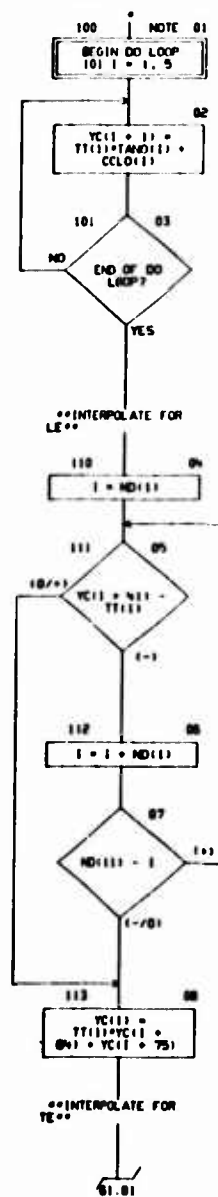
CTOT

40.034--3

*****BASIC
VERSION OF SUBROUTINE
CTOT--OVERLAY
(17,0)*****
***SAME AS SUBR
CTOT1 IN OVERLAY
(14,0)***
***SAME AS SUBR
CTOT2 IN OVERLAY
(15,0)***

**BLENDED WING LE/TE
INTERPOLATION
SUBROUTINE TO
CAERO**
*INTERPOLATE FOR
AERO CHORD AND 1/C
FOR GIVEN Y(A)*
*INTERPOLATE FOR
STRUCTURAL CHORD DATA
IF X(A) GIVEN*

Y(1)=TT(1),
X(1)=TT(2)
***CALC AERO DATA AT
Y(1)***



:1570

1571

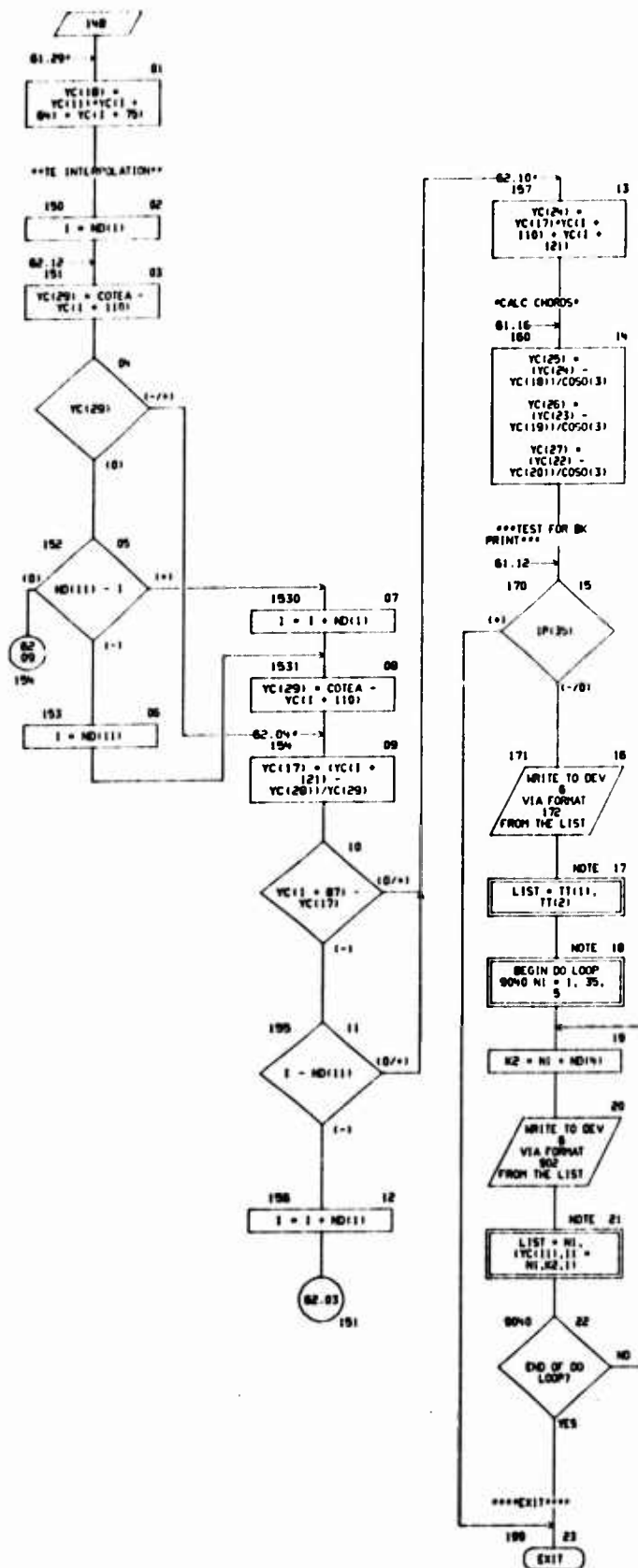


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
COMMON /IPRINT/ (P180)
DIMENSION T(6220),D(2060),CD(2000),ND(100),DC(100),
YC(150),TT(124),YTC(60),
TAND(9),CCLO(9),SIND(6),COSO(6)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(YC(1),T(201)),(TT(1),T(411)),(DC(1),D(1401)),(YTC(1),T(351)),
(TAND(1),T(122)),(CCLO(1),T(131)),(SIND(1),T(140)),
(COSO(1),T(146)),
(COTE, T(152))
172  FORMAT(1H,20X,7MT(1) =,FB,3.5X,7MT(2) =,FB,3/6H YC)
172  FORMAT(20H0 ***C101 SUEP--(P=33*** ,//3X,2F12.3,/6H0 YC)
902  FORMAT(1H 14,5E10.8)

```

06/10/74

AUTOFLOW CHART SET - SHEEP WING AND EMPENNAGE MODULE - PAGE 64

CHART TITLE - INTRODUCTORY COMMENTS

*****SUBROUTINE PINTO*****

PASS/DESIGN DATA PUNCH/PRINT FOR FLUT. OPT. PROGRAM

CHART TITLE - SUBROUTINE PINTO

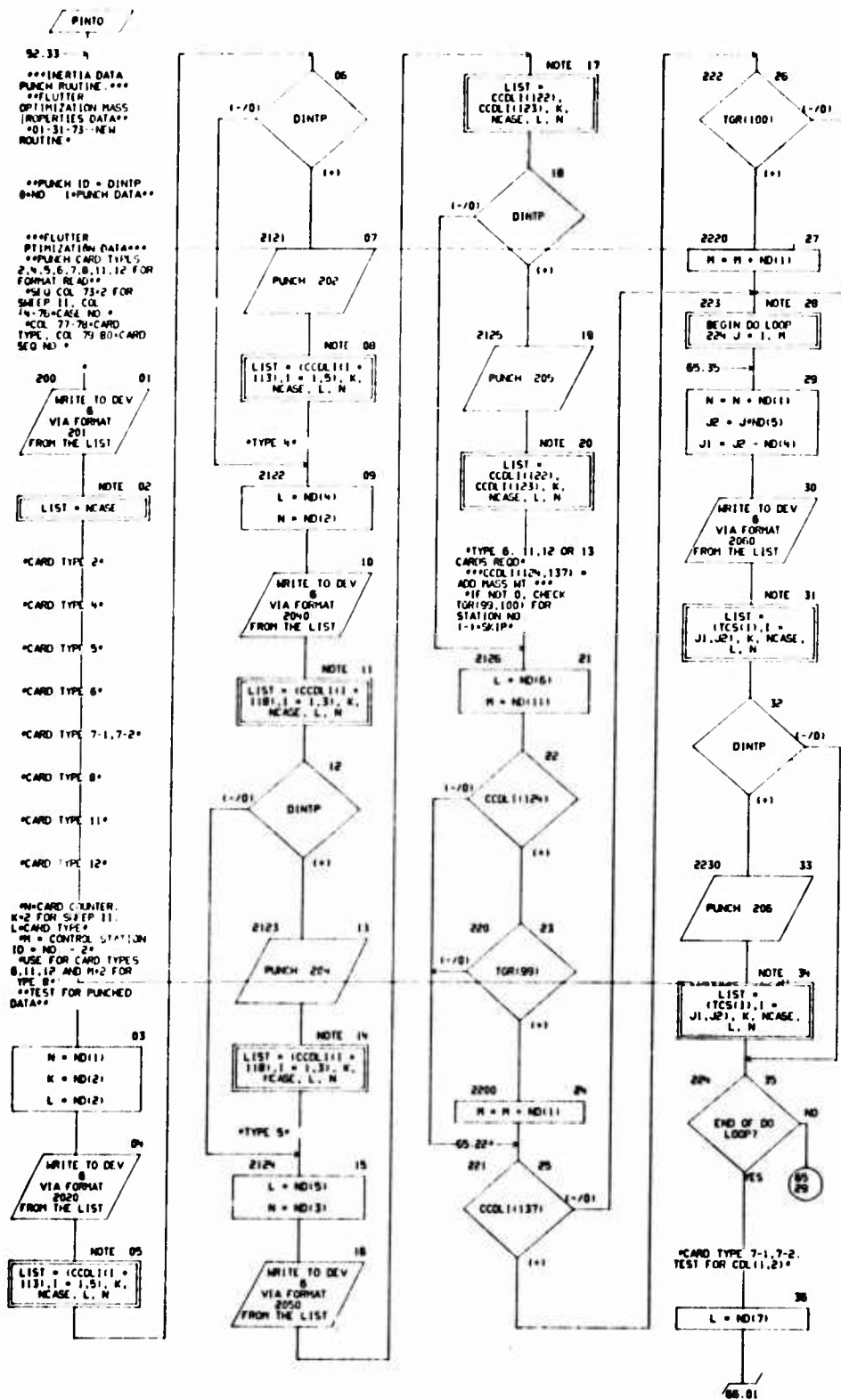


CHART TITLE - SUBROUTINE PINTO

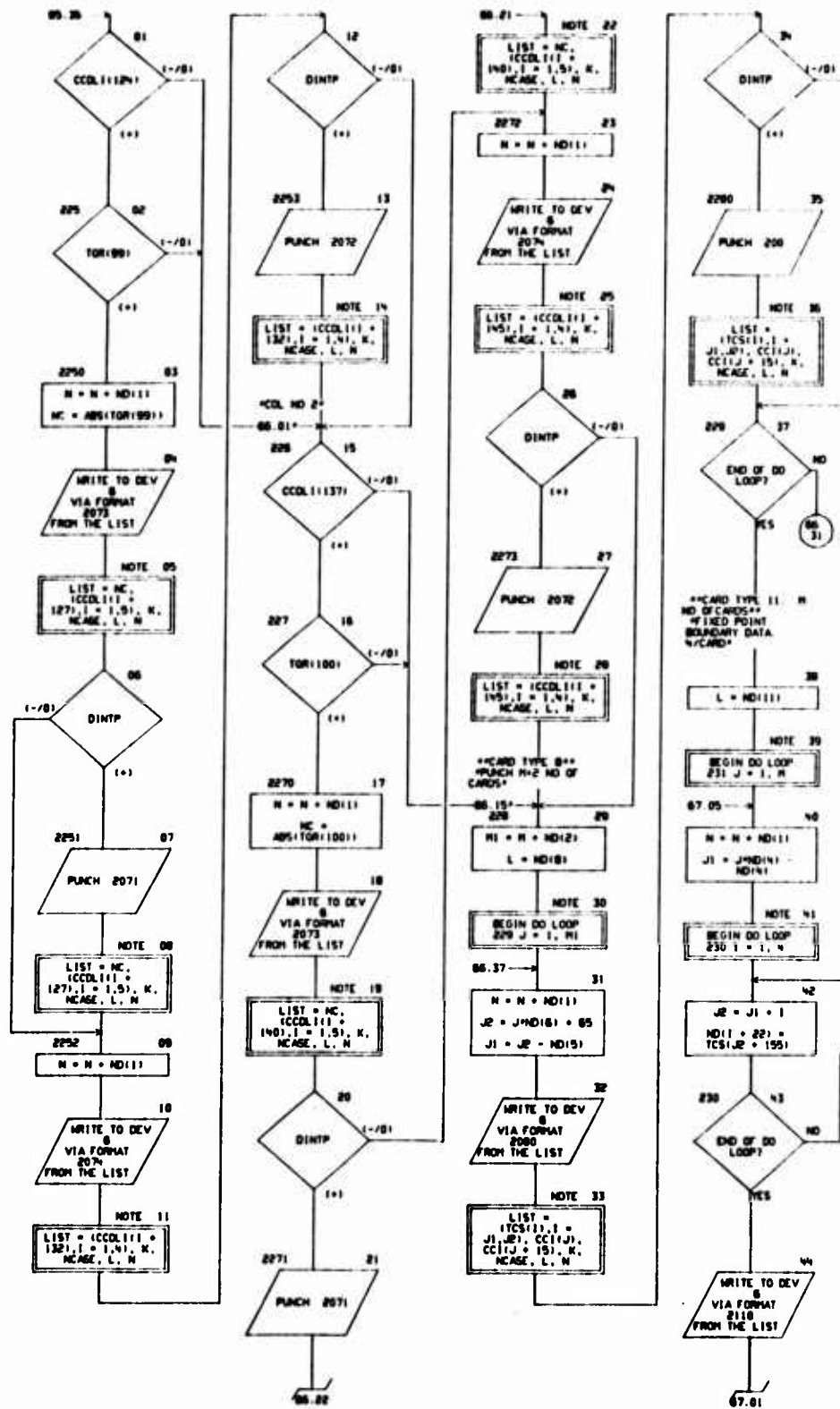


CHART TITLE: SUBROUTINE PINTO

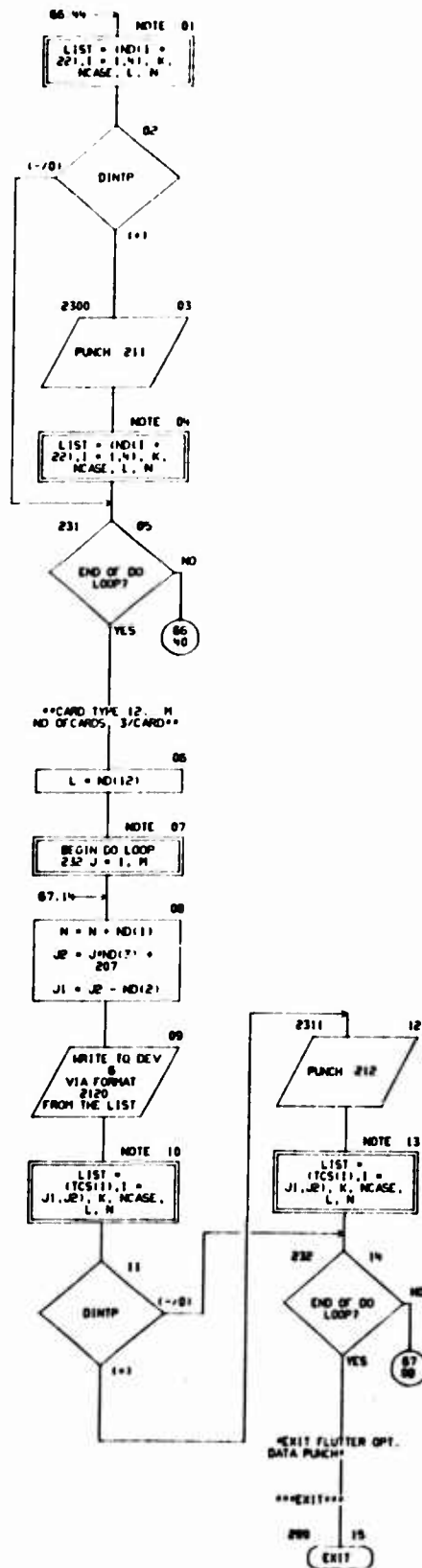


CHART TITLE - NON-PROCEDURAL STATEMENTS

```

COMMON T
DIMENSION T(16320),D(2060),CD(2000),ND(100),DC(100),
CCDL(150),TGR(100),
CC(1300),
TCS(250)
EQUIVALENCE (D(1),T(2061)),(CD(1),T(4121)),(ND(1),T(6121)),
(CD(1),D(1401)),(TCS(1),CD(1401)),
(CCDL(1),CD(1501)),(TGR(1),T(1751)),
(CC(1),CD(1651)),
(IDINTP,D(2001)),
(N,ND(301),11,ND(291),1K,ND(311),1K,ND(1601))
201  FORMAT (12H) CASE NO 13,62H ***FLUTTER OPTIMIZATION DATA.
      (MOD, CARD IMAGE DATA)***,22X,11H** PINTO **//)
202  FORMAT (5E12.5,12X,11,13,12,12)
2020  FORMAT (3X,5E16.0,16X,11,13,12,12)
204  FORMAT (12X,3E12.5,24X,11,13,12,12)
2040  FORMAT (19X,3E16.0,32X,11,13,12,12)
205  FORMAT (2E12.5,48X,11,13,12,12)
2050  FORMAT (3X,2E16.0,64X,11,13,12,12)
206  FORMAT (5E12.5,12X,11,13,12,12)
2060  FORMAT (3X,5E16.0,16X,11,13,12,12)
2071  FORMAT (112,5E12.5,11,13,12,12)
2072  FORMAT (4E12.5,24X,11,13,12,12)
2073  FORMAT (3X,116,5E16.0,11,13,12,12)
2074  FORMAT (3X,16X,4E16.0,16X,11,13,12,12)
208  FORMAT (4F6.2,4E12.5,11,13,12,12)
2080  FORMAT (3X,4F8.2,4E16.0,11,13,12,12)
211  FORMAT (4112,24X,11,13,12,12)
2110  FORMAT (3X,4116,32X,11,13,12,12)
212  FORMAT (3E12.5,36X,11,13,12,12)
2120  FORMAT (3X,3E16.0,48X,11,13,12,12)

```